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NORTHEAST UNIVERSITY

ARCHIVES

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NORTHEASTERN & UNIVERSITY &

SCHOOL
OF ENGINEERING
1925-1926



NORTHEASTERN UNIVERSITY

Boston Young Men's Christian Association

Boston, Massachusetts



THE LOBBY

NORTHEASTERN UNIVERSITY

SCHOOL OF ENGINEERING

Co-operative Plan
Full-Time Plan



1925-1926

"Practice and Theory Co-ordinated"

SCHOOL CALENDAR

*School Sessions (Co-operative Plan)
for Upper Classmen*

*Engineering Practice Periods
for Upper Classmen*

1925-1926

1925-1926

SEPTEMBER							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	1	2	3	4	5	6
6	7	8	9	10	11	12	7	8	9	10	11	12	13
13	14	15	16	17	18	19	14	15	16	17	18	19	20
20	21	22	23	24	25	26	21	22	23	24	25	26	27
27	28	29	30	..	..	..	28	29	30	31	..	..	..
..
OCTOBER							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	1	2	3
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	..
..
NOVEMBER							MAY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	..	..	..	..	1	..
8	9	10	11	12	13	14	2	3	4	5	6	7	8
15	16	17	18	19	20	21	9	10	11	12	13	14	15
22	23	24	25	26	27	28	16	17	18	19	20	21	22
29	30	..	..	..	..	..	23	24	25	26	27	28	29
..	..	..	..	..	..	..	30	31	..	..	..	..	..
DECEMBER							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	31	..	..	27	28	29	30	..	..	..
..
JANUARY							JULY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	..	..	..	1	2	3
3	4	5	6	7	8	9	4	5	6	7	8	9	10
10	11	12	13	14	15	16	11	12	13	14	15	16	17
17	18	19	20	21	22	23	18	19	20	21	22	23	24
24	25	26	27	28	29	30	25	26	27	28	29	30	31
31	..	..	..	..	..	..	..	..	..	..	..	..	..
FEBRUARY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	1	2	3	4	5	6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	8	9	10	11	12	13	14
14	15	16	17	18	19	20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	22	23	24	25	26	27	28
28	..	..	..	..	..	..	29	30	31	..	..	..	..
..
SEPTEMBER							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	1	2	3	4	5	6
6	7	8	9	10	11	12	7	8	9	10	11	12	13
13	14	15	16	17	18	19	14	15	16	17	18	19	20
20	21	22	23	24	25	26	21	22	23	24	25	26	27
27	28	29	30	..	..	..	28	29	30	31	..	..	..
..
OCTOBER							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	1	2	3
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	..
..
NOVEMBER							MAY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	..	..	..	..	1	..
8	9	10	11	12	13	14	2	3	4	5	6	7	8
15	16	17	18	19	20	21	9	10	11	12	13	14	15
22	23	24	25	26	27	28	16	17	18	19	20	21	22
29	30	..	..	..	..	..	23	24	25	26	27	28	29
..	..	..	..	..	..	..	30	31	..	..	..	..	..
DECEMBER							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	31	..	..	27	28	29	30	..	..	..
..
JANUARY							JULY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	..	..	..	1	2	3
3	4	5	6	7	8	9	4	5	6	7	8	9	10
10	11	12	13	14	15	16	11	12	13	14	15	16	17
17	18	19	20	21	22	23	18	19	20	21	22	23	24
24	25	26	27	28	29	30	25	26	27	28	29	30	31
31	..	..	..	..	..	..	..	..	..	..	..	..	..
FEBRUARY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	1	2	3	4	5	6	1	2	3	4	5	6	7
7	8	9	10	11	12	13	8	9	10	11	12	13	14
14	15	16	17	18	19	20	15	16	17	18	19	20	21
21	22	23	24	25	26	27	22	23	24	25	26	27	28
28	..	..	..	..	..	..	29	30	31	..	..	..	..
..

School Periods for Division A indicated by type thus: 1, 2, 3.

School Periods for Division B indicated by type thus: 1, 2, 3.

Periods when school is not in session indicated by type thus: 1, 2, 3.

Calendar for School Year

1925—1926

GENERAL NOTES

Division B is at engineering practice while Division A is at school.
Division A is at engineering practice while Division B is at school.
Periods at school or at engineering practice are shown by different kinds of type on Yearly Calendar.

First-year students co-operate on the twenty-week plan.

Upper classmen co-operate on the five-week plan, except in summer, when one period for each division is six weeks in length.

Students at engineering practice have no holidays except those allowed by employers.

SEPTEMBER 7, MONDAY

Labor Day. (School exercises omitted.)

SEPTEMBER 10, THURSDAY

Entrance examinations.

SEPTEMBER 14, MONDAY

Opening of First Semester for Division A Freshmen and Upper classmen

OCTOBER 12, MONDAY

Columbus Day. (School exercises omitted.)

OCTOBER 19, MONDAY

Second Period begins for Division A Freshmen.

Opening of First Semester for Division B Upper classmen.

First Term begins for Division AA Upper classmen.

NOVEMBER 23, MONDAY

Third Period (second semester) begins for Division A Freshmen.

Second Period begins for Division A Upper classmen.

First Term begins for Division BB Upper classmen.

NOVEMBER 26, THURSDAY

Thanksgiving. (School exercises omitted.)

DECEMBER 25-26, FRIDAY-SATURDAY

Christmas Recess. (School exercises omitted.)

DECEMBER 28, MONDAY

Fourth Period begins for Division A Freshmen.

Second Period begins for Division B Upper classmen.

Second Term begins for Division AA Upper classmen.

JANUARY 1-2, FRIDAY-SATURDAY

New Years recess. (School exercises omitted.)

JANUARY 21, THURSDAY

Entrance examinations.

FEBRUARY 1, MONDAY

Opening of First Semester for Division B Freshmen.

Third period (second semester) begins for Division A Upper classmen

Second Term begins for Division BB Upper classmen.

Special summer term work begins for Division A Freshmen.

FEBRUARY 22, MONDAY

Washington's Birthday. (School exercises omitted.)

MARCH 8, MONDAY

Second Period begins for Division B Freshmen.

Third Period (second semester) begins for Division B Upper classmen.

Third term begins for Division AA Upper classmen.

NORTHEASTERN UNIVERSITY

APRIL 12, MONDAY

Third Period (second semester) begins for Division B Freshmen.

Fourth Period begins for Division A Upper classmen.

Third term begins for Division BB Upper classmen.

APRIL 19, MONDAY

Patriots' Day. (School exercises omitted.)

MAY 15, SATURDAY

All work must have been completed by Division A Seniors.

MAY 17, MONDAY

Fourth Period begins for Division B Freshmen and Upper classmen.

MAY 31, MONDAY

Observance of Memorial Day. (School exercises omitted.)

JUNE 12, SATURDAY

Field Day. (School exercises omitted.)

JUNE 16, WEDNESDAY

Entrance examinations.

JUNE 17, THURSDAY

Bunker Hill Day. (School exercises omitted.)

JUNE 19, SATURDAY

All work must have been completed by Division B Seniors.

JUNE 20, SUNDAY

Baccalaureate Sermon.

JUNE 21, MONDAY

Annual Commencement.

JUNE 21, MONDAY

Summer Term begins for Division B Freshmen.

Review Courses begin for Division A Upper classmen.

JULY 5, MONDAY

Observance of Independence Day. (School exercises omitted.)

AUGUST 16, MONDAY

Summer Term begins for Division A Freshmen.

Review Courses begin for Division B Upper classmen.

SEPTEMBER 6, MONDAY

Labor Day. (School exercises omitted.)

SEPTEMBER 9, THURSDAY

Entrance Examinations.

SEPTEMBER 13, MONDAY

Opening of School for year 1926-1927.

SPECIAL NOTES FOR 1926

UPPER CLASSES

June 21-July 31

Division A vacation

Division B at engineering practice

August 2-September 11

Division B vacation

Division A at engineering practice

June 21-July 17

Division A review courses

Division B review courses

FRESHMEN CLASS

June 21-July 17

Division B summer school

Division A review courses

July 19-July 31

Division B vacation

August 2-August 14

Division A vacation

August 16-September 11

Division A summer school

Division B review courses.

SCHOOL OF ENGINEERING

TRUSTEES

CHAIRMAN

ARTHUR STODDARD JOHNSON

VICE-CHAIRMAN

ALBERT HARMON CURTIS

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WILMAN EDWARD ADAMS	ERNEST LOVERING
WASHINGTON IRVING BULLARD	FRANCIS POPE LUCE
WILLIAM CONVERSE CHICK	WILLIAM EVERETT MACURDA
WALTON LEE CROCKER	MILTON CRAWFORD MAPES
LEWIS ABBOTT CROSSETT	EDWARD FULLER MINER
ROBERT GRAY DODGE	WALTER BEMIS MOSSMAN
RICHARD MATHER EVERETT	ARTHUR PERRY, JR.
HENRY BRADLEE FENNO	THOMAS HASTING RUSSELL
BENJAMIN A. FRANKLIN	SABIN POND SANGER
JOHN HENRY HARWOOD	CHARLES PECK SISSON
GEORGE CABOT LEE	FRANK PALMER SPEARE
HENRY GARDNER LORD	FRANCIS ROBERT CARNEGIE STEELE
GEORGE EMERY WILLIAMSON	

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ALBERT HARMON CURTIS

SECRETARY

GALEN DAVID LIGHT

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WILLIAM CONVERSE CHICK	WILLIAM EVERETT MACURDA
WALTON LEE CROCKER	FRANK PALMER SPEARE
ROBERT GRAY DODGE	FRANCIS ROBERT CARNEGIE STEELE

NORTHEASTERN UNIVERSITY

THE EXECUTIVE COUNCIL

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President of the University

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Secretary of the University

CARL STEPHENS ELL, A.B., M.S.
Director of the Engineering and Technical Schools

EVERETT AVERY CHURCHILL, A.B., Ed.D.
Director of the Schools of Business Administration, Law, Commerce and Finance

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TURNER FLOWERS GARNER, A.M., Ed.M., *Dean*

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EVENING POLYTECHNIC SCHOOL

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NORTHEASTERN AUTOMOTIVE SCHOOL

HOWARD P. LE FAVOUR, *Principal*

VOCATIONAL INSTITUTE

CHARLES HENRY SAMPSON, B.S., *Principal*

SPECIAL ADVISORS

FRANK BONNYMAN CAWLEY, B.S.
Director of Physical Education

ERNEST HENRY TIPPETT
Director of Religious Education

SCHOOL OF ENGINEERING

OFFICERS OF INSTRUCTION

FRANK PALMER SPEARE, LL.B., M.H. <i>President</i>	483 Boylston St., Brookline
GALEN DAVID LIGHT, A.B. <i>Secretary</i>	815 Center St., Jamaica Plain
CARL STEPHENS ELL, A.B., M.S. <i>Dean</i>	52 Clement Ave., West Roxbury

PROFESSORS

HENRY BISSELL ALVORD, S.B. <i>Professor of Civil Engineering</i>	32 Hollis St., South Weymouth
GEORGE FRANCIS ASHLEY <i>Professor of Drawing</i>	West Townsend, Mass.
JOSEPH ARTHUR COOLIDGE, S.B. <i>Professor of Physics</i>	20 Martin St., Cambridge
CARL STEPHENS ELL, A.B., M.S. <i>Professor of Civil Engineering</i>	52 Clement Ave., West Roxbury
HAROLD WESLEY MELVIN, A.B. <i>Professor of English</i>	155 Blue Hill Ave., Milton
WILLIAM LINCOLN SMITH, S.B. <i>Professor of Electrical Engineering</i>	4 Academy Lane, Concord
JOSEPH SPEAR, A.B. <i>Professor of Mathematics</i>	31 Matchett St., Brighton
JOSEPH WILLIAM ZELLER, S.B. <i>Professor of Mechanical Engineering</i>	1471 Washington St., West Newton

ASSISTANT PROFESSORS

ALFRED JOHN FERRETTI, S.B. <i>Assistant Professor of Mechanical Engineering</i>	92 Church St., Lynn
GEORGE BLODGETT GEE, C.E. <i>Assistant Professor of Drawing</i>	17 Pine St., Belmont
EMIL ANTON GRAMSTORFF, S.B. <i>Assistant Professor of Civil Engineering</i>	Farmcrest Ave., Lexington
JAMES WARREN INGALLS, S.B., C.E. <i>Assistant Professor of Civil Engineering</i>	65 Graves St., East Lynn
WALDEMAR STANWOOD MCGUIRE, S.B. <i>Assistant Professor of Chemical Engineering</i>	243 Prospect St., West Roxbury
WINTHROP ELIOT NIGHTINGALE, A.B., S.B. <i>Assistant Professor of Civil Engineering</i>	36 Dickerman Rd., Newton Hlds.
ROLAND GUYER PORTER, B.E.E. <i>Assistant Professor of Electrical Engineering</i>	317 Common St., Watertown
JOHN BUTLER PUGSLEY, A.B. <i>Assistant Professor of Mathematics</i>	23 Hardy Ave., Watertown

NORTHEASTERN UNIVERSITY

HENRY EDWARD RICHARDS, S.B. <i>Assistant Professor of Electrical Engineering</i>	31 First St., Melrose
MARIUS ROLLAND, Ph.B., M.A. <i>Assistant Professor of Industrial Administration</i>	146 Hemenway St., Boston
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A. <i>Assistant Professor of Social Sciences</i>	63 Paris St., Medford
FREDERICK ARLINGTON STEARNS, S.B. <i>Assistant Professor of Mechanical Engineering</i>	208 Grove St., Melrose
SAMUEL ABBOTT SMITH STRAHAN <i>Assistant Professor of Chemistry</i>	26 Hemenway St., Boston
HOLLEY STETSON WINKFIELD, S.B. <i>Assistant Professor of Electrical Engineering</i>	35 Dartmouth St., Arlington

INSTRUCTORS

WILLIAM JEFFERSON ALCOTT, JR., B. S. in C. E. <i>Instructor in Mathematics</i>	91 Chestnut St., Everett
HENRY GUSTAVE ANDERSON, B.M.E. <i>Instructor in Mechanical Engineering</i>	30 Garnet Rd., West Roxbury
CHARLES OSCAR BAIRD, JR. <i>Instructor in Civil Engineering</i>	32 Beacon Hill Ave., Lynn
CHESTER PACKARD BAKER, B.Ch.E. <i>Instructor in Chemical Engineering</i>	53 Wendell Ave., Brockton
LLOYD ARTHUR BINGHAM, B.E.E. <i>Instructor in Electrical Engineering</i>	316 Huntington Ave., Boston
RUFUS HALLOWELL BOND, A.B., LL.B. <i>Instructor in Mathematics</i>	106 Lawrence St., Medford
WARREN ADELBERT CHILSON, B.Ch.E. <i>Instructor in Chemical Engineering</i>	80 Gainsboro St., Boston
JOHN ORRIN COPLEY <i>Instructor in Drawing</i>	110 Washington St., Leominster
STANLEY GODDARD ESTES, A.B. <i>Instructor in English</i>	316 Huntington Ave., Boston
CHESTER JAMES GINDER, B.C.E. <i>Instructor in Civil Engineering</i>	23 Russell St., Everett
FORREST MELDON HATCH, S.B. <i>Instructor in Physics</i>	38 Ferry St., Malden
LAWRENCE HUSTON HOUTCHENS, A.B. <i>Instructor in English</i>	490 Beacon St., Boston
ARTHUR BIRD MONTGOMERY, B.B.A. <i>Instructor in Social Sciences</i>	1000 Hyde Park Ave., Hyde Park
EDWARD SNOW PARSONS, B.C.E. <i>Instructor in Mathematics</i>	705 Washington St., Gloucester
JOHN JAMES SINNETT <i>Instructor in Physical Training</i>	24 Bardwell St., Jamaica Plain

SCHOOL OF ENGINEERING

LEOPOLD FREDERICK STRAUSS, Ph.D. <i>Instructor in German</i>	155 West Canton St., Boston
GEORGE WESLEY TOWLE, S.B. <i>Instructor in Mathematics</i>	663 Fellsway, Medford
ELIOT FRANKLIN TOZER <i>Instructor in Drawing</i>	82 Granite Place, East Milton
ALBERT EDWARD WHITTAKER, B.M.E. <i>Instructor in Physics</i>	15 Laurel Street, Lynn

ASSISTANTS

RAYMOND BRADFORD AYER <i>Assistant in Electrical Engineering</i>	Walnut St., Plainville
GEORGE MARTIN BURKE <i>Assistant in Physics</i>	26 Brattle St., Arlington
CEDRIC CLARENCE CAMPBELL <i>Assistant in Electrical Engineering</i>	42 Dearborn St., Medford
LAWRENCE RHODES CLARKE <i>Assistant in Chemistry</i>	450 Green St., Cambridge
ELTON GUILD CROCKETT <i>Assistant in Electrical Engineering</i>	99 West Bacon St., Plainville
LAWRENCE BLANCHARD FOLSOM <i>Assistant in Chemistry</i>	Greenville, Maine
ALLAN BRADFORD FOYE <i>Assistant in Physics</i>	381 East St., Westdale
HARRY BLISS FOSTER <i>Assistant in Electrical Engineering</i>	14 Abbott St., Medford
ANDREW HODSDON HEYWOOD <i>Assistant in Physics</i>	North Yarmouth, Maine
THOMAS JOSEPH LYNCH <i>Assistant in Mathematics</i>	26 Leyland St., Dorchester
HOWARD WARREN MORSE <i>Assistant in Electrical Engineering</i>	108 Lawton Ave., Lynn
CHARLES WILLIAM SKINNER <i>Assistant in Chemistry</i>	Main St., Hamilton
CLARENCE WINSLOW TAYLOR <i>Assistant in Chemistry</i>	24 Everett Sq., Allston
STANLEY GORDON THWING <i>Assistant in Electrical Engineering</i>	12 Davenport St., Cambridge
GEORGE LEWIS ZIEGLER <i>Assistant in Physics</i>	25 Highland St., Concord Junction

NORTHEASTERN UNIVERSITY

ADMINISTRATIVE OFFICERS

CARL STEPHENS ELL, A.B., M.S. <i>Dean</i>	52 Clement Ave., West Roxbury
JOHN BUTLER PUGSLEY, A.B. <i>Registrar</i>	23 Hardy Ave., Watertown
WINTHROP ELIOT NIGHTINGALE, A.B., S.B. <i>Director of Engineering Practice</i>	36 Dickerman Rd., Newton Hlds.
GEORGE WESLEY TOWLE, S.B. <i>Assistant Director of Engineering Practice</i>	663 Fellsway, Medford
JOSEPH SPEAR, A.B. <i>Director of Student Activities</i>	31 Matchett St., Brighton
MILTON JOHN SCHLAGENHAUF, A.B., B.D., M.A. <i>Director of School Publications</i>	63 Paris St., Medford
ARTHUR BIRD MONTGOMERY, B.B.A. <i>Assistant to the Dean</i>	1000 Hyde Park Ave., Hyde Park
CHESTER JAMES GINDER, B.C.E. <i>Assistant to the Registrar</i>	23 Russell St., Everett
MARJORIE HUNT BLAKE <i>Stenographer</i>	407 Hollis St., Framingham
ANNIE LAURIE CORBETT <i>Secretary to the Dean</i>	88 Melrose St., Melrose Highlands
FLORENCE WHEELER DERRIN <i>Recorder</i>	276 Walnut St., Brookline
MARIE CLARA FAUSEL <i>Assistant Bursar</i>	10 Ridge St., Roslindale
EDNA JANE GARRABRANT <i>Secretary to the Director of Engineering Practice</i>	120 Hancock St., Cambridge
EDITH ELVIRA LARSON <i>Assistant Librarian</i>	61 Linden Ave., Somerville
JESSIE MARY PAINE <i>Secretary to the Registrar</i>	91 Perkins St., East Somerville
EVELYN IVY PHILLIPS <i>Secretary to the Director of Student Activities</i>	372 Chatham St., Lynn
E. LEOLA STROUT <i>Stenographer</i>	19 Greene St., Somerville
LULU JANE THYNG <i>Secretary to the Committee on Admission</i>	57 Ridgewood St., Dorchester
MARY DIXON TURNER <i>Secretary to the Director of School Publications</i>	163 Forest St., Melrose
MYRA EDNA WHITE <i>Librarian</i>	175 Hemenway St., Boston
ANNA EASTON WHITNEY <i>Bookkeeper</i>	118 Hemenway St., Boston

SCHOOL OF ENGINEERING

DEPARTMENTS OF THE SCHOOL

MAIN DEPARTMENTS

SCHOOL ADMINISTRATION

Professor Pugsley, in charge

ENGINEERING PRACTICE

Professor Nightingale, in charge

STUDENT ACTIVITIES

Professor Spear, in charge

PROFESSIONAL DEPARTMENTS

CIVIL ENGINEERING

Professor Alvord, in charge

MECHANICAL ENGINEERING

Professor Zeller, in charge

ELECTRICAL ENGINEERING

Professor Smith, in charge

CHEMICAL ENGINEERING

Professor Strahan, in charge

ADMINISTRATIVE ENGINEERING

Professor Schlagenhauf, in charge

GENERAL DEPARTMENTS

DRAWING

Professor Ashley, in charge

ENGLISH

Professor Melvin, in charge

INDUSTRIAL ADMINISTRATION

Professor Rolland, in charge

MATHEMATICS

Professor Spear, in charge

PHYSICS

Professor Coolidge, in charge

SOCIAL SCIENCES

Professor Schlagenhauf, in charge

NORTHEASTERN UNIVERSITY

*FACULTY COMMITTEES

EXECUTIVE COMMITTEE

DEAN ELL, <i>Chairman</i>	Professor Nightingale
Professor Pugsley	Professor Spear

Admission

DEAN ELL, <i>Chairman</i>	
Professor Pugsley	Professor Melvin

Administrative

PROFESSOR PUGSLEY, <i>Chairman</i>	
Professor Coolidge	Professor Spear
Professor Nightingale	Professor Schlagenhauf
Professor Alvord	Professor Strahan
Professor Smith	Professor Zeller

Athletics

A. FACULTY COMMITTEE

WINTHROP E. NIGHTINGALE, <i>Chairman</i>	
Turner F. Garner	John B. Pugsley
Arthur B. Montgomery	Joseph Spear

B. GENERAL COMMITTEE

JOSEPH SPEAR, <i>Chairman</i>	
Rufus H. Bond	Edward S. Parsons
John O. Copley	Joseph W. Zeller
Turner F. Garner	Captain of each sport

Fraternities

MR. BOND, *Chairman*

Professor Ashley	Professor Melvin
Professor Ferretti	Professor Schlagenhauf
Professor Gramstorff	Professor Strahan
Professor Ingalls	

Publications

PROFESSOR SCHLAGENHAUF, <i>Chairman</i>	
Professor Gee	Mr. Towle
Mr. Ginder	Mr. Tozer
Mr. Montgomery	

*The Dean is, *ex-officio*, a member of all standing committees.

SCHOOL OF ENGINEERING

Faculty Class Advisors

Harold W. Melvin	Class of 1925
Emil A. Gramstorff	Class of 1926
Holley S. Winkfield	Class of 1927
Joseph A. Coolidge	Class of 1928

Faculty Student Advisors

CIVIL ENGINEERING

Senior	Henry B. Alvord
Junior	James W. Ingalls
Sophomore	James W. Ingalls
Freshman	Emil A. Gramstorff

MECHANICAL ENGINEERING

Senior	Joseph W. Zeller
Junior	Alfred J. Ferretti
Sophomore	Alfred J. Ferretti
Freshman	Eliot F. Tozer

ELECTRICAL ENGINEERING

Senior	William L. Smith
Junior	Roland G. Porter
Sophomore	Henry E. Richards
Freshman	{ William J. Alcott, Jr. { Holley S. Winkfield

CHEMICAL ENGINEERING

Senior	Samuel A. S. Strahan
Junior	Samuel A. S. Strahan
Sophomore	Chester P. Baker
Freshman	Harold W. Melvin

ADMINISTRATIVE ENGINEERING

Freshman	Milton J. Schlagenhauf
Sophomore	Milton J. Schlagenhauf

NORTHEASTERN UNIVERSITY

SPECIAL LECTURES

JOE MITCHELL CHAPPLE

Editor of the "National Magazine"
"Alaska"

HENRY H. CRANE

Center Methodist Episcopal Church, Malden, Mass.
"If I Were Starting In"

EDWIN H. HUGHES

Bishop, Methodist Episcopal Church, Boston Area
"Honesty"

HARRY M. LEVI

Rabbi, Temple Israel
"Education and Religion"

FRANCIS J. McCONNELL

Bishop, Methodist Episcopal Church, Pittsburgh, Penn.
"Christianity and Human Values"

LEMUEL H. MURLIN

President of Boston University
"Self Expression"

LEWIS O. HARTMAN

Editor Zion's Herald
"Present Day Russia"

HARRY W. WHITE

Secretary, Foreign Division, International Committee, Y. M. C. A.
"Civilization's Battle Front"

EDWARD WHITING

Editor of "Whiting's Column," Boston Herald
"Newspapers and People"

COL. GEORGE WILLIAMS

Officer in Charge, National Guard Officers, First Corps Area
"Citizens' Military Training Camp"

FRANK W. WRIGHT

Deputy Commissioner of Education, Massachusetts
"Education for Education"

HON. LORING B. YOUNG

Speaker of the House of Representatives, Massachusetts
"The Government of Massachusetts"

SCHOOL OF ENGINEERING

GENERAL INFORMATION

History of Northeastern University

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896 that the actual foundations for the University were laid. The larger number of courses offered required a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering was opened in 1909 and given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, and Bachelor of Chemical Engineering. The School of Business Administration was opened in September, 1922, and has the right to grant the degree of Bachelor of Business Administration. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, the Automotive School, and the Vocational Institute are conducted under the administration of the University. In March, 1923, the University was granted general degree granting power by the Massachusetts Legislature. Divisions of the University offering evening instruction have been established at Worcester, Springfield, New Haven and Providence.

In fifteen years the School of Engineering, which was started without special educational entrance requirements, little equipment, a registration of only eight pupils, has grown to be a recognized factor in the community with rigid require-

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ments of scholarship and character, equipment worth thousands of dollars, a highly-trained and able faculty, and an enrollment of over eleven hundred students. Young men of moderate financial resources may receive college engineering training, defray part of their expenses, and in addition become familiar with the actual practice of their profession.

BOSTON

Many advantages from its location in Boston accrue to the students attending Northeastern University. The Boston Museum of Fine Arts, which is located within a few blocks of the University, contains one of the greatest collections of paintings, sculptures, and other objects which confer unsurpassed opportunity for artistic education and enjoyment. Boston is an important musical center and is visited by many lecturers and men of note.

Points of historical interest including the Old North Church in which the famed signal lanterns were hung; the Old State House in which famous leaders of the Revolution attended to matters of state, the Old South Meeting House and Faneuil Hall, the rendezvous of the Revolutionists, sites of the Boston Massacre and Tea Party, and the present capitol of the Commonwealth of Massachusetts add much to the attractiveness of Boston as an educational center. Located in Charlestown is Bunker Hill Monument of Revolutionary fame.

In Cambridge, which is located just across the Charles River, are found former homes of Longfellow and Lowell, the Elm under which Washington took command of the American Army, Harvard University, and other points of historical interest.

Passing through Cambridge and Arlington is the road leading to Lexington and Concord along which the British soldiers retreated after the first battle of the Revolution.

Boston's park system and reservations of the Metropolitan District Commission afford splendid opportunity to enjoy nature, scenery, and pleasing environment.

Railroad and other transportation facilities afford many and convenient means of communication with the immediate and more distant parts of the country.

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Object of the School of Engineering

Technical school instruction, depending on class-room work and laboratories, must always lack some of the vital characteristics of an actual manufacturing plant. One is carried on for educational purposes, the other is operated for dividends. This latter fact gives the co-operative school one advantage over the usual educational plan. Instead of devoting several years to work in which he may later find himself entirely unfitted, the School puts the student to work in a commercial plant where he may "find" himself. He learns life in its vital issues, as well as the problem of getting along with men, thus early learning whether he has made a wise or unwise choice of his life work. This training demonstrates to him the use and value of his school work, and finally gives him an unusual opportunity to acquire from actual experience that rare characteristic, *executive ability*, without which his life probably would be spent on the lower levels of industry.

The fundamental aim of the Northeastern University School of Engineering is to give young men sound training in both the theoretical and practical principles upon which professional practice is based. Thus they are enabled to advance farther and more rapidly in their chosen work than they could expect to do without further education than that of a high school course. *The training is not in any sense that of a trade school, but is that of a regular engineering school of high standards.*

The School offers five branches of engineering: civil, mechanical, electrical, chemical and administrative. The end sought is to give to students who have already had a high school preparation, or its equivalent, a good training in the fundamental sciences of mathematics, chemistry, and physics, and in the important applications of the principles of these sciences to the several branches of engineering. Much stress is laid on the development of the ability to apply the acquired knowledge to new engineering problems, and an effort is made to be thorough without leading the student through a maze of mere mental gymnastics.

The program of studies differs from that of many schools, in that a student is not permitted a wide range of subjects from which to choose. It has been found that better results are obtained by prescribing the principal studies which the student is to pursue.

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CO-OPERATIVE PLAN

To illustrate the co-operative plan, let us take the case of two men, "A" and "B" who desire to pursue one of the courses offered.

If the men are members of any one of the three upper classes (sophomore, junior, or senior), "B" will be assigned to one of the plants of a firm that is co-operating with the school. Here he receives practical experience under school supervision for a period of five weeks. "A" who is called the alternate of "B," has meanwhile been attending classes at the school. At the end of the five-week period, "B" and "A" change places, that is, "B" takes the place of "A" at school, while "A" relieves his alternate at the plant of the employing firm. This procedure is repeated each period, the same two students alternating on the job for at least one calendar year. "A" and "B" are spoken of as "Division A" and "Division B" men respectively.

In the case of freshmen, the alternating period is of twenty weeks' duration. The practical work is not necessarily of an engineering character. Division B freshmen will ordinarily continue until time of registration with such employment as they may obtain. Freshmen are expected, when so advised by the Engineering Practice Department, to take engineering practice jobs.

Correlation of Practical and Theoretical Work

Co-operating employers agree, when practicable, to employ the students in the various departments of their establishments. This training is as thorough and complete as the academic work. Where possible, the plant experience ranges from the handling of the raw materials to the shipment of the finished product. This practical training includes a knowledge of the executive duties of the plant as well as the use of machines. Therefore, at the end of his course, the graduate should know both plant operation and the administrative problems. The greatest value can be derived from such courses by the student only by continuing work with the firms offering this type of training for *at least* one year subsequent to graduation. Statistics show that from thirty to thirty-five per cent of each graduating class remain with their co-operating employers after graduation.

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Engineering Practice Reports

The correlation of practical and theoretical work is further promoted by required report writing. These engineering practice reports are written during the working periods by all co-operative students. Subjects of these reports are selected by the student after discussion with a member of the Engineering Practice Department and must be approved by him. The reports are designed to encourage the observational and investigative qualities of the students and to help them to appreciate more fully the extent and value of their experience. In fact, they are short theses, rather than reports of work done by the student in the plant. They are corrected by the Engineering Practice Department and are discussed with the student during the next following school period. Exceptionally valuable results have been obtained from these reports in the past. The value derived must necessarily be directly proportional to the conscientious and intelligent concentration by the student upon this phase of the work.

Engineering Practice Grades

Complete and detailed records are kept of the engineering practice of each student. A progress grade is given for the engineering practice completed to the close of each school semester. It is based upon the written reports, the employer's reports obtained by cards at the end of each working period and by occasional personal interviews, and upon the general attitude of the student toward all of the features of his engineering practice. It is not possible to secure a degree unless this part of the course is completed satisfactorily.

Number of Positions Available

The number of positions at our disposal in any one branch of engineering is necessarily limited. Thus far desirable positions have been secured for our students as the growth of the school demanded. Engineering practice is not required of freshmen but will be provided for those who prefer to be assigned by the School.

Some students prefer to secure their own positions. In such cases, alternates will usually be furnished by the School, if desired. Such individual arrangements are entirely acceptable

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to the School, and may be made by any applicant, subject to the approval of the Director of Engineering Practice.

Attitude of Co-operating Firms

That co-operating employers favor our plan is clearly demonstrated by their retention of the same students from year to year. Moreover, employers listed with us apply for additional students to fill vacancies whenever such can be filled by our men. The men under whose supervision the students have been doing work are almost unanimous in their approval of our plan. The enthusiasm, earnestness and intelligence the students show in the performance of their duties is a subject of comment among the employers.

Assignment to Engineering Practice

A student is assigned to an engineering practice job by the following routine: He is given general information in regard to the work, the hours, the location, the rate of pay, etc. If the job seems acceptable, he is given a copy of the Engineering Practice Regulations governing co-operative work and is required to sign the agreement referred to therein. He is then given a card of introduction and sent to the employer for personal interview. During the interview with the employer the student is expected to acquaint himself with further details of the nature of the work and the conditions under which he will be expected to work. He may then accept the position subject to his acceptance by the employer. The latter indicates his acceptance or rejection of the student by marking the introduction card and returning it by mail to the school. It is expected that no student will accept placement by the School unless he intends to continue throughout the year in school and with the firm in question, in accordance with the Engineering Practice Regulations.

During the periods of engineering practice, students report for work as do other employees, no special privileges being granted. Students are not permitted to discontinue engineering practice except by previous arrangements with the School. *In all cases of absences from engineering practice, whether avoidable or not, the student or a member of his family is required to notify by telephone immediately the EMPLOYING FIRM and the SCHOOL. Failure to do so is sufficient cause for dismissal.*

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The School places the student at work with the employing firm and is responsible for his presence and conduct at work as well as the quality and scope of his work. All difficulties arising in regard to students who are on engineering practice are taken up with the School authorities at the next following school period.

Students in the junior and senior years are almost invariably placed with firms which give them experience directly in line with the course of study followed at school.

Freshmen and sophomores, as a rule, are assigned to work not so technical in character, but designed to train the younger men in the fundamental qualities of cheerfulness, dependability, enthusiasm, and "grit." In connection with his engineering practice during the student's college course these attributes are emphasized at every opportunity. The first year's training is designed especially to develop these habits. If a young man can form habits of mental and physical alertness and reliability, he has laid a sure foundation for his success and happiness in later life. The detailed technical information and experience is added in the three upper years.

Credits

The conscientious pursuit and successful completion of engineering practice assignments are necessary for the student to obtain the degree. Seniors are required to take engineering practice from September to June for four alternate five-week periods and receive therefor twenty credits toward the degree. Sophomores and juniors, who elect the co-operative plan, work for four five-week and one six-week alternate periods, a total of twenty-six weeks and receive therefor twenty-four credits toward the degree each year. Students on the full-time plan, however, do not receive credit toward the degree for the practical experience they may obtain during summer vacations.

During periods of business depression or seasonal cessation of certain industries when it may be impossible for the School to provide satisfactory employment for all students, a student may be required to attend school and take additional school work along with the full-time students. The passing of the required number of courses taken under such circumstances will prevent lapse of credit toward the degree as the result of being out of work.

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Credit obtained on the full-time plan cannot be substituted for deficient credit on the co-operative plan and engineering practice credit cannot be substituted for deficient credit on the full-time plan.

In general, changes and transfers in engineering practice are made in September, at the beginning of the school year.

Earnings

The firms treat our students as they do other employees in regard to method of payment, rates of pay, chances of promotion, etc. Each firm makes individual arrangements with the student.

The rates of pay for students in the School are low. Thus the employer feels justified in devoting time to the instruction of the students and in transferring them at approximately regular intervals from one department to another.

The following table of wages by agreement with the co-operating firms is the minimum to be paid the students.

\$12 per week for the first and second years.

14 per week for the third year.

16 per week for the fourth year.

Ordinarily on the special training courses a student starts with each firm at the minimum wage and is promoted as his ability may warrant. In certain cases the students receive less than the minimum stated above, but this is usually made up to them in some other way.

No upper limit is set. All employers are requested to pay whatever rate the student proves himself worth. The average is \$18 to \$20, even for men of exceptional ability, because the students are given the privilege of attending school on the co-operative plan and of being transferred from one department to another. The total income is more than enough to pay the tuition and the necessary school expenses, but does not cover board, room rent, and other living expenses, either while in school or on the job.

Educational Certificates

The law of Massachusetts requires all students under twenty-one years of age to obtain Educational Certificates. Massachusetts General Laws 1921, Chapter 149, Section 95:

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"No minor over sixteen and under twenty-one shall be employed in a factory, workshop, manufacturing, mechanical or mercantile establishment, or in a public or private bowling alley, pool or billiard room, bootblack stand or establishment, barber shop, or in the construction or repair of buildings, or by an express or transportation company, except as provided for pupils in co-operative courses, unless his employer procures and keeps on file an educational certificate showing the age of the minor and his ability or inability to read and write as hereinafter provided." If students living outside of Boston bring with them Birth Certificates, it will save time and trouble. The Educational Certificates, upon request, may be obtained from the Superintendent of Schools in the city or town where the student resides during the period of his employment, if he lives in Massachusetts. Students residing outside of the Commonwealth during engineering practice periods, but working within the Commonwealth are required to obtain Educational Certificates from the Superintendent of Schools or designated official of the town where employed.

Engineering Practice Regulations

(1) A student on assignment to an engineering practice job is required to sign the co-operative agreement to retain that job for a calendar year. The first week on the job is the only trial period allowed. If the student feels that he does not want to retain that job for at least the calendar year, he should so notify the Engineering Practice Department during that first week. If without such notice a student still retains the job for more than a week, his co-operative agreement becomes effective automatically, and he is required by the School to fulfill that agreement. Any exceptions may be allowed only upon petition to the Engineering Practice Committee.

This agreement obligates the employer to retain the student on the job only so long as the co-operation is practicable. Employers are advised to discharge students after fair trial for unsatisfactory work, incompetency, inability, or any irregularity. In other words, every student is expected to work conscientiously and to the best of his ability and retain his job in competition with others only through satisfactory service.

(2) A student giving notice of dissatisfaction or desire for

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different assignment during his trial week is expected to stay on the job until relieved by another student assigned by the Department of Engineering Practice.

(3) Students are required to continue on their engineering practice jobs throughout the regular summer periods as shown in the calendar in the catalog, in order to obtain the necessary credit for the degree.

(4) In case of sickness or other emergency requiring absence from work, the EMPLOYER and the Engineering Practice Department must be notified immediately by telephone or messenger.

(5) Students wishing to participate *during working hours* of engineering practice periods in student activities must petition the Engineering Practice Department, in order that the necessary steps may be taken to arrange with the employer for such participation if possible.

(6) A student discharged or temporarily laid off is expected to notify the Engineering Practice Department immediately.

(7) A student must not voluntarily leave a job for any reason whatsoever without the consent of the Engineering Practice Department.

(8) A student abandoning a job or so conducting himself on his job as to purposely cause his discharge may be immediately indefinitely suspended from college for breach of discipline.

(9) Any dissatisfaction or trouble arising on jobs should be reported to the Engineering Practice Department and adjustments brought about through the department.

Schedules of Practical Work

Below are typical schedules of practical work that have been arranged for our students by some of the co-operating firms.

These schedules are arranged with the basic idea of giving the student a thorough training through the several different departments, but must of necessity be varied in accordance with the needs of those departments.

BOSTON & MAINE RAILROAD CO.

ONE YEAR	Erecting Dept.
ONE YEAR	Machine Dept.
ONE YEAR	Machine Dept.
ONE YEAR	Erecting Dept.
	Drafting Room

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BOSTON WOVEN HOSE & RUBBER CO.

- ONE YEAR Factory
- ONE YEAR Inspection, Clerical, and Stock Depts.
- ONE YEAR Chemical Laboratory, Inspection, and Machine Tools Shop
- ONE YEAR Testing Dept., Production Dept. and Mechanical Dept.

CONDIT ELECTRICAL MANUFACTURING CO.

- ONE YEAR Testing Dept.
Switchboard Dept.
Office
- ONE YEAR Switchboard Dept.
Construction
Diagramming
- ONE YEAR Sales Dept.
Quoting and Estimating
Correspondence

THE DENNISON MANUFACTURING CO.

- ONE YEAR Carpenter's Helper
Pattern Maker's Helper and Case Making
Mill-wright Work and Elevator, Fire Door Inspection
Helper in Electrical Dept.
- ONE YEAR Machine Shop Stock Room
Machine Shop
Grinding Room
- ONE YEAR Power Plant Work
Accident Prevention Work
Filing Plans, Blue Prints, Tracing, Etc.
Planning Dept. Work
- ONE YEAR Tracing and General Work
Detailing and General Drafting

EDISON ELECTRIC ILLUMINATING COMPANY OF BOSTON

The schedule of the Edison Electric Illuminating Company of Boston is divided into the following general classifications. Very few co-operating students, if any, obtain experience in all branches, but progress from year to year in the respective branches as conditions require.

Standardizing

- (a) Testing and standardizing of electrical instruments
- (b) Miscellaneous standardization
- (c) Repairs on electrical instruments
- (d) Laboratory high voltage tests

Steam Practice

- (a) Turbine, engine and boiler tests
- (b) Instrument tests and repairs
- (c) Miscellaneous tests

Electrical Testing

- (a) Testing and repairing of electrical instruments in power stations and sub-stations
- (b) Cable tests
- (c) High voltage tests on apparatus and in the field
- (d) Checking up construction work
- (e) Miscellaneous electrical tests

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Chemical Engineering

(a) Fuel analysis

(b) Miscellaneous tests and analysis of oils, water paints and other materials

Photography

Office Work

HUNT-SPILLER MANUFACTURING CORPORATION

ONE YEAR General laboratory and plant work, including preparation of samples

Pyrometry

Use and care of metallurgical apparatus

ONE YEAR Complete analysis of coal, coke, lime-stone, sand, iron, oils, etc.

ONE YEAR Keeping of general metallurgical records, filing and making of reports

ONE YEAR Analysis for combined, graphitic, and total carbon with a complete knowledge of a carbon combustion apparatus

NORTON COMPANY

Grinding Machine Division

ONE YEAR Tool Crib

Automatic Screw Machine

Engine Lathe

Turret Lathe

Drills

ONE YEAR Milling Machine

Gear Cutter

Boring Mill

Planer

Grinder

ONE YEAR Assembly

Inspection

Stock Room (finished parts)

Production Office

OTHER CO-OPERATING FIRMS

The following 250 firms co-operate with the school when students are available and business conditions warrant:

ABERTHAW CONSTRUCTION COMPANY, Boston (Civil)

ALLEN, ALBION B., General Contractor, Amherst (Civil)

AMERICAN ACID COMPANY, Medford (Chemical)

AMERICAN AGRICULTURAL CHEMICAL COMPANY, Everett and Weymouth (Chemical)

AMERICAN GLUE COMPANY, Peabody (Electrical)

AMERICAN RADIO & RESEARCH CORPORATION, Medford Hillside (Electrical)

AMERICAN SCHAEFFER & BUDENBERG CORPORATION, Boston (Mechanical)

AMORY FOUNDRY, Jamaica Plain (Mechanical and Chemical)

APPLETON, THOMAS A., Civil Engineer, Salem (Civil)

ARNOLD MACHINE COMPANY, Rockland (Mechanical)

ASPINWALL & LINCOLN, Civil Engineers, Boston (Civil)

BAKER, WALTER & COMPANY, LTD., Boston (Administrative)

BARNES, ROWLAND H., Civil Engineer, Waltham (Civil)

BARRETT COMPANY, THE, Everett (Chemical)

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BATES, WALTER C., Civil Engineer, Jamaica Plain (Civil)
BEACON OIL COMPANY, Everett (Mechanical and Chemical)
BERNITZ FURNACE APPLIANCE COMPANY, Boston (Mechanical)
BETHLEHEM SHIPBUILDING CORPORATION, Quincy (Civil, Mechanical, Electrical)
BEVERLY GAS AND ELECTRIC COMPANY, Beverly (Electrical)
BIRD AND SON, INC., East Walpole (Chemical)
BISHOP, J. W., COMPANY, Boston (Civil)
BLAKE ELECTRIC MANUFACTURING COMPANY, Boston (Electrical)
BLANCHARD MACHINE COMPANY, Cambridge (Mechanical)
BLISS, G. E., INC., Malden (Electrical)
BORDEN, FRANCIS S., Civil Engineer, Fall River (Civil)
BOSTON & ALBANY RAILROAD, Boston (Civil)
BOSTON BELTING COMPANY, Roxbury (Mechanical)
BOSTON BRASS COMPANY, Waltham (Mechanical)
BOSTON CONSOLIDATED GAS COMPANY, Boston (Chemical)
BOSTON FUEL TESTING COMPANY, Boston (Chemical)
BOSTON GEAR WORKS, Quincy (Mechanical)
BOSTON ICE COMPANY, Boston (Mechanical)
BOSTON INDIA RUBBER COMPANY, Boston (Chemical)
BOSTON & MAINE RAILROAD, Boston (Mechanical)
BOSTON PEN COMPANY, Somerville (Mechanical)
BOSTON SAND AND GRAVEL COMPANY, Boston (Mechanical and Electrical)
BOSTON UNIVERSITY—Laboratory, Boston (Chemical)
BOSTON VARNISH COMPANY, East Everett (Chemical)
BOSTON WOVEN HOSE & RUBBER COMPANY, Cambridge (Mechanical and Chemical)
BRACKETT, L. G., Civil Engineer, Boston (Civil)
BRADFORD & WEED, Civil Engineers, Lynn (Civil)
BRANCH, ERNEST W., Civil Engineer, Quincy (Civil)
BRAYTON, GEORGE B., Boston (Administrative)
BROWN, BURTIS S., Consulting Engineer, Boston (Civil)
BRYANT, HENRY F., Town Engineer, Brookline (Civil)
BUFF & BUFF MANUFACTURING COMPANY, Jamaica Plain (Civil, Mechanical)
BUTT, H. G., MANUFACTURING COMPANY, Boston (Mechanical)
CADILLAC AUTOMOBILE COMPANY, Boston (Mechanical)
CAMBRIDGE RUBBER COMPANY, Cambridge (Electrical)
CASEY FOSTER COMPANY, Boston (Administrative)
CHASE-SHAWMUT COMPANY, Newburyport (Electrical)
CLARK & SMITH, Architects, Quincy (Civil)
COBB, BEESLEY & MILES, Civil Engineers, Springfield (Civil)
COFFIN VALVE COMPANY, Neponset (Mechanical)
CONANT MACHINE COMPANY, Concord (Mechanical)
CONCORD ELECTRIC LIGHT DEPARTMENT, Concord (Electrical)
CONDIT ELECTRICAL MANUFACTURING COMPANY, South Boston (Electrical)
CONNECTICUT TELEPHONE & ELECTRIC COMPANY, Meriden, Conn. (Electrical)
CORBETT, E. M., Civil Engineer and Architect, Fall River (Civil)
CRITTENDEN MANUFACTURING COMPANY, Jamaica Plain (Mechanical)
CROCKER, H. S., City Engineer, Brockton (Civil)
CROSBY STEAM GAGE & VALVE COMPANY, Charlestown (Mechanical)
COUCH, S. H., COMPANY, Quincy (Electrical)
CUNDARI COMPANY, Boston (Civil)
DENNISON MANUFACTURING COMPANY, Framingham (Mechanical and Electrical)

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DOMESTIC ELECTRIC COMPANY, Wellesley (Electrical)
 DONNELLY MACHINE COMPANY, Brockton (Mechanical)
 DRAKE, A. B., Civil Engineer, New Bedford (Civil)
 DRAPER CORPORATION, THE, Hopedale (Civil)
 DRISCOLL & COMPANY, Heating Contractors, Salem (Mechanical)
 DYER, JOHN, Civil Engineer, Melrose (Civil)
 EASTERN METAL & REFINING COMPANY, Malden (Mechanical)
 EDISON ELECTRIC ILLUMINATING COMPANY of BOSTON (Mechanical,
 Electrical, Chemical)
 ELECTRICAL INSTALLATION COMPANY, Boston (Electrical)
 E. I. DUPONT DE NEMOURS COMPANY, Everett (Chemical)
 ELLIOT, C. J., Civil Engineer, Boston (Civil)
 ELLIS MANUFACTURING COMPANY, Milldale, Conn. (Mechanical)
 EMERSON APPARATUS COMPANY, Melrose (Mechanical)
 EVANS, R. R., Essex County Engineer, Salem (Civil)
 EVATT, W. M., COMPANY, Boston (Civil)
 FALES, L. F., Walpole (Mechanical)
 FARNHAM & GLEASON, INC., Wellesley (Civil)
 FELLOWS GEAR SHAPER COMPANY, Springfield, Vt. (Mechanical)
 FIRST NATIONAL BANK OF BOSTON (Administrative)
 FOUNDATION COMPANY, INC., OF NEW YORK (Civil)
 FULLER, GEORGE A., COMPANY, Boston (Civil)
 GANNETT, CHARLES H., Civil Engineer, Boston (Civil)
 GENERAL ALLOY COMPANY, South Boston (Mechanical)
 GENERAL ELECTRIC COMPANY, Lynn (Chemical)
 GENERAL ELECTRIC COMPANY, Pittsfield (Electrical)
 GENERAL RADIO COMPANY, Cambridge (Electrical)
 GERARD ELECTRIC COMPANY, Boston (Electrical)
 GOLDING MANUFACTURING COMPANY, Franklin (Mechanical)
 GOWING, FREDERICK H., Architect, Boston (Civil)
 GREENFIELD ELECTRIC LIGHT & POWER COMPANY, Greenfield (Electrical)
 HAMILTON, P. D. G., Boston (Civil)
 HAMMOND V. HAYES LABORATORY, Boston (Mechanical)
 HARVEY, ARTHUR C., COMPANY, Boston (Mechanical)
 HAYWARD, R. LORING, Civil Engineer, Taunton (Civil)
 HEDLUND, CHARLES, COMPANY, Quincy (Electrical)
 HIXON ELECTRIC COMPANY, Boston (Electrical)
 HOLDRIDGE, WARREN E., Mattapan (Electrical)
 HOLTZER CABOT ELECTRIC COMPANY, Roxbury (Electrical)
 HOLYOKE WATER POWER COMPANY, Holyoke (Electrical)
 HORTONIA LIGHT & POWER COMPANY, Rutland, Vt. (Electrical)
 HOOD RUBBER COMPANY, Watertown (Mechanical)
 HOWE & FRENCH, Boston (Chemical)
 HUME BODY CORPORATION, Boston (Mechanical)
 HUMPHREY, C. B., Court Surveyor, Boston (Civil)
 HUNT-SPILLER MANUFACTURING CORPORATION, South Boston (Chemical)
 HYDE, DANIEL W., Civil Engineer, Boston (Civil)
 HYGRADE LAMP COMPANY, Salem (Electrical)
 INTERNATIONAL ENGINEERING WORKS, Framingham (Mechanical)
 INTERNATIONAL PAPER COMPANY, Franklin, N. H. (Electrical)
 INTERNATIONAL SILVER COMPANY, Meriden, Conn. (Chemical)
 JAGER, CHARLES J., COMPANY, Boston (Mechanical)
 JARVIS ENGINEERING COMPANY, South Boston (Mechanical)
 JOY, C. F., JR., Town Engineer, Milton (Civil)
 KEENE GAS & ELECTRIC COMPANY, Keene, N. H. (Electrical)

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KENDALL, F. H., Middlesex County Engineer, Cambridge (Civil)
 KENNEY BROS. & WOLKINS, Boston (Mechanical)
 KINNEY MANUFACTURING COMPANY, Jamaica Plain (Mechanical)
 KNOTT, L. E., APPARATUS COMPANY, Cambridge (Mechanical and Electrical)
 LANCASTER MILLS, Clinton (Mechanical)
 LANDERS, FRARY & CLARKE, New Britain, Conn. (Mechanical)
 LAWTON MILLS CORPORATION, Plainfield, Conn. (Mechanical)
 LEIGHTON MACHINE COMPANY, East Manchester, N. H. (Mechanical)
 LEVER BROTHERS COMPANY, Soap Manufacturers, Cambridge (Chemical)
 LINDSAY, P. K., & COMPANY, Boston (Mechanical)
 LINES, H. WALES, COMPANY, Meriden, Conn. (Civil)
 MAINE STATE HIGHWAYS, Augusta, Maine (Civil)
 MALDEN & MELROSE GAS & ELECTRIC COMPANY, Malden (Electrical, Chemical)
 MANHASSET MANUFACTURING COMPANY, Putnam, Conn. (Electrical)
 MANNING, MAXWELL & MOORE, INC., Fitchburg (Mechanical)
 MARTIN ROCKING FIFTH WHEEL COMPANY, Springfield (Mechanical)
 MASON REGULATOR COMPANY, Milton (Mechanical)
 MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES, Boston (Mechanical)
 MASSACHUSETTS DEPT. OF PUBLIC WORKS, Testing Laboratory, Boston (Chemical)
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge (Chemical)
 MASSACHUSETTS PUBLIC WORKS DEPT., Division of Highways, Boston (Civil)
 MCCLINTOCK & WOODFALL, Civil Engineers, Boston (Civil)
 McELWAIN, W. H., COMPANY, Manchester, N. H. (Mechanical)
 MCINTIRE, F. N., BRASS WORKS, Boston (Mechanical)
 MERCHANT, A. P., COMPANY, Boston (Electrical)
 MERRIMAC CHEMICAL COMPANY, North Woburn and Everett (Chemical)
 METAL GOODS MANUFACTURING COMPANY, Boston (Mechanical, Electrical)
 METROPOLITAN DISTRICT COMMISSION, Boston (Civil)
 MONKS & JOHNSON, Structural Engineers, Boston (Civil)
 MORGAN CONSTRUCTION COMPANY, Worcester (Mechanical)
 MOSHER, C. R., Civil Engineer, North Dartmouth (Civil)
 NEAR, B. G., Electrical Contractor, Boston (Electrical)
 NEW DEPARTURE MANUFACTURING COMPANY, Bristol, Conn. (Mechanical)
 NEW ENGLAND CONFECTIONARY COMPANY, Boston (Mechanical)
 NEW ENGLAND FUEL AND TRANSPORTATION COMPANY, Everett (Chemical)
 NEW ENGLAND OIL REFINING COMPANY, Fall River (Civil)
 NEW ENGLAND SLATE BLACKBOARD COMPANY, Boston (Mechanical)
 NEW ENGLAND STRUCTURAL COMPANY, Everett (Mechanical)
 NEWTON CITY ENGINEER (Civil)
 NEW YORK, NEW HAVEN & HARTFORD R.R. (Mechanical)
 NORFOLK IRON WORKS, Quincy (Mechanical)
 NORTHEASTERN UNIVERSITY—Laboratories (Civil, Mechanical, Electrical, Chemical)
 NORTON COMPANY, Worcester (Mechanical)
 NORWOOD TOWN ENGINEER (Civil)
 OLD COLONY FOUNDRY, East Bridgewater (Mechanical)
 OXFORD PAPER COMPANY, Rumford, Maine (Mechanical)
 PALMER ELECTRIC & MANUFACTURING COMPANY, Cambridge (Electrical)
 PANTHER RUBBER MANUFACTURING COMPANY, Stoughton (Chemical)
 PARAMOUNT MAINTENANCE COMPANY, Boston (Electrical)
 PARKER, BATEMAN & CHASE, Clinton (Civil)

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PAVER'S MACHINE SHOP, Franklin (Mechanical)
 PEJEPSCOT PAPER COMPANY, Brunswick, Maine (Electrical)
 PERRY, GEORGE W., City Engineer, Putnam, Conn. (Civil)
 PIERCE & BARNES, Civil Engineers, Boston (Civil)
 PLUNKETT, R. A., Civil Engineer, Boston (Civil)
 PLYMOUTH ELECTRIC LIGHT COMPANY, Plymouth (Electrical)
 PLYMOUTH TOWN ENGINEER, Plymouth (Civil)
 PNEUMATIC SCALE CORPORATION, Norfolk Downs (Mechanical)
 POTTER, HERBERT S., Electrical Contractor, Boston (Electrical)
 PORTLAND, MAINE, Department of Public Works (Civil)
 PRATT, HERBERT A., Worcester (Civil)
 PUNCHARD, W. H., Landscape Architect, Boston (Civil)
 RAWSON ELECTRICAL INSTRUMENT COMPANY, Cambridge (Electrical)
 REED, ALONZO B., Consulting Engineer, Boston (Civil)
 RIDLON, FRANK, COMPANY, Boston (Electrical)
 RUGGLES-KLINGEMANN MANUFACTURING COMPANY, Salem (Mechanical)
 RUUD MANUFACTURING COMPANY, Boston (Mechanical)
 SACO-LOWELL SHOPS, Newton Upper Falls (Electrical)
 SAMPSON, GEORGE T., Civil Engineer, Medford (Civil)
 SAMSON ELECTRIC COMPANY, Canton (Electrical)
 SANBORN COMPANY, Instrument Manufacturers, Boston (Mechanical and Electrical)
 SARGENT, ALBERT F., Civil Engineer, Malden (Civil)
 SAYLES FINISHING PLANTS, Saylesville, R. I. (Chemical)
 SHARPLES LABORATORY, Boston (Chemical)
 SHATTUCK, L. H., INC., Manchester, N. H. (Civil)
 SHAY & LEARY, Civil Engineers, Lynn (Civil)
 SIMPLEX ELECTRIC HEATING COMPANY, Cambridge (Electrical)
 SIMPLEX WIRE AND CABLE COMPANY, Cambridge (Electrical)
 SIMPSON BROTHERS CORPORATION, Boston (Civil)
 SKINNER ORGAN COMPANY, Dorchester (Mechanical)
 SKINNER, SHERMAN & ESSELEN, INC., Boston (Chemical)
 SOMERVILLE MACHINE & TOOL COMPANY, Somerville (Mechanical)
 SPENCER-THERMOSTAT COMPANY, Cambridge (Mechanical)
 ST. AMANDS, L. J., Architect, Boston (Civil)
 STARRET, L. S., TOOL COMPANY, Athol (Mechanical)
 STONE & WEBSTER, INC., Boston (Civil)
 STOWERS, FRED W., Civil Engineer and Contractor, Methuen (Civil)
 STRATHMORE PAPER COMPANY, Woronoco (Mechanical)
 STURTEVANT, B. F., COMPANY, Hyde Park (Mechanical and Electrical)
 STEET & KENDALL, Gardner (Civil)
 SYMONDS, HENRY A., Boston (Civil)
 TAYFORD COMPANY, THE, Lee (Electrical)
 THOMSON, HENRY C., Patent Attorney, Boston (Mechanical)
 TILO ROOFING COMPANY, Somerville (Administrative)
 TRIMONT MANUFACTURING COMPANY, Roxbury (Mechanical)
 TRINITY RADIO CORPORATION, Boston (Electrical)
 TEUFANT, A. P., Civil Engineer, Brockton (Civil)
 TUFTS, NATHANIEL, Meter Works, Boston (Mechanical)
 TURNER CONSTRUCTION COMPANY, Boston (Civil)
 TURNER TANNING MACHINERY COMPANY, Peabody (Mechanical)
 UNION SPINNING & PLATING COMPANY, Boston (Mechanical)
 UNION TWIST DRILL COMPANY, Athol (Mechanical)
 UNITED ELECTRIC LIGHT COMPANY, Springfield (Electrical)
 UNITED ELECTRIC RAILWAYS COMPANY, Providence, R. I. (Civil, Mechanical, Electrical)

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UNITED SHOE MACHINERY COMPANY, Beverly (Mechanical and Electrical)
UNITED STATES ENVELOPE COMPANY, Holyoke (Mechanical)
UNIVERSAL HOIST & BODY COMPANY, Everett (Mechanical)
VAN VALKENBURGH, J. J., Civil Engineer, Framingham (Civil)
VARNEY, HENRY A., Town Engineer, Brookline (Civil)
VAUGHAN ENGINEERS, Boston (Civil)
VENNARD, WILLIAM L., City Engineer, Lynn (Civil)
VICTOR SHOE MACHINERY COMPANY, Lynn (Mechanical)
VISCOLOID COMPANY, Leominster (Mechanical)
WALTHAM WATCH COMPANY, Waltham (Mechanical and Chemical)
WARREN BROTHERS COMPANY, Paving Materials Laboratory, Cambridge
(Chemical)
WERBY LABORATORIES, Boston (Chemical)
WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, Springfield and
Hartford, Conn. (Electrical)
WEYMOUTH LIGHT & POWER COMPANY, Weymouth (Electrical)
WHIDDEN BEEKMAN COMPANY, Boston (Civil)
WHITE, HARTLEY L., CIVIL ENGINEER, Braintree (Civil)
WHITMAN and HOWARD, Civil Engineers, Boston (Civil)
WHITNEY, CHARLES F., Civil Engineer, Boston (Civil)
WICKWIRE SPENCER STEEL CORPORATION, Palmer (Mechanical)
WILLARD SERVICE STATION, South Framingham (Electrical)
WINSTON & COMPANY, Kingston, N. Y. (Civil)
WIRELESS SPECIALTY APPARATUS COMPANY, Jamaica Plain (Electrical)
WOBURN MACHINE COMPANY, Woburn (Mechanical)
WOLLASTON FOUNDRY COMPANY, Norfolk Downs (Mechanical)
WOODS, S. A., MACHINE COMPANY, Boston (Mechanical, Electrical)
WORCESTER ELECTRIC LIGHT COMPANY, Worcester (Mechanical and
Electrical)
WORTHINGTON PUMP AND MACHINERY CORPORATION, E. Cambridge
(Mechanical)

NORTHEASTERN UNIVERSITY

FULL-TIME PLAN

FOR SOPHOMORES AND JUNIORS

Employers seek the engineer as the type of man best qualified to design and construct the physical requirements of our modern civilization and a type, peculiarly fitted by training and association, to operate and manage the complex public and industrial mechanisms which he has been active in creating. Intelligent labor recognizes in the engineer an expert, allied neither to capital nor to labor itself, and who is perhaps the one element in the world today best fitted to deal with the pressing problem of the relations between capital and labor.

Recognizing the many new possibilities open to the engineer, representative engineering societies are requesting colleges to incorporate in their curriculum courses which will fit for leadership. This demand is a logical development in the evolution of engineering education. "The Federated American Engineering Societies, therefore, speaking for the engineering profession, urges upon engineering colleges an increased attention to the social aspects of engineering activities, and a broadening of their technical training in every way possible, to develop in engineering students the spirit of and a capacity for active leadership, not only in industry, but in public affairs."

A liberal education, admittedly proper for students of medicine, law, or theology, is now held to be the best training for the future leaders in engineering. Education is an opportunity, nothing more. It cannot of itself make an engineering leader. To young men possessing the natural characteristics for leadership—high character, integrity, initiative, common-sense, executive ability and resourcefulness—the university must offer the best educational advantages.

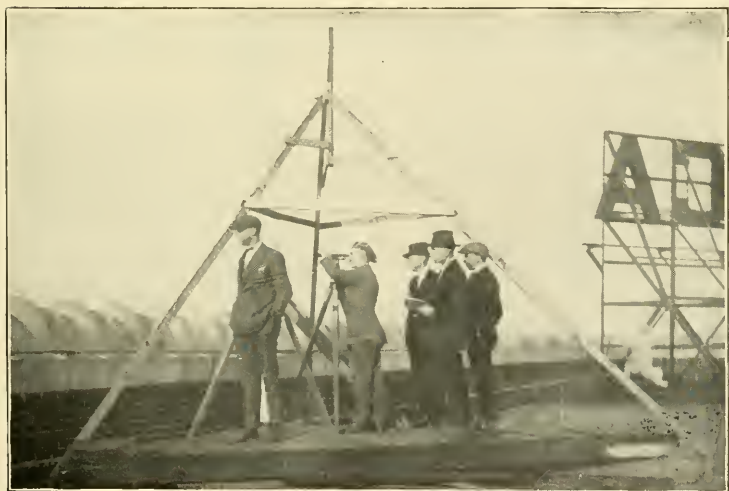
Northeastern University recognizes its obligation in this matter, and therefore offers in addition to its regular engineering courses an opportunity for a liberal education which is designed to give the future engineer the broad training requisite to a successful career.

At present, work is offered in economics, literature, public speaking, ethics, history, government, psychology, business administration, industrial finance, commercial law, and sociology. These courses are planned to make the engineer articu-

SCHOOL OF ENGINEERING



CLASS IN RAILROAD ENGINEERING DRAFTING

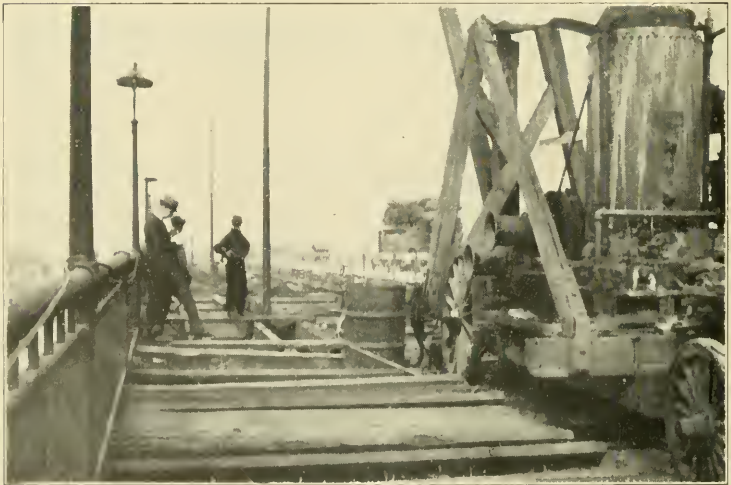


TRIANGULATION SURVEYING PARTY

NORTHEASTERN UNIVERSITY



MAKING A PLANE TABLE SURVEY



INSPECTION, HARVARD BRIDGE RECONSTRUCTION, METROPOLITAN
DISTRICT COMMISSION

SCHOOL OF ENGINEERING

late, to acquaint him with the social and industrial conditions which he must sooner or later face, to give him an understanding of the principles of business, to familiarize him with some of the fundamental laws of human behavior, to develop in him a knowledge of the past as the best guide through the mazes of present-day life, and to awaken in him the vision of future possibilities by introducing him to the best thoughts of the ages.

Purpose of Full-Time Plan

The courses are planned to broaden the mental horizon of the student by the analysis and formulation of political, social, economic and industrial problems. Special emphasis is placed upon the engineer's relationship to these mooted questions. Economic and social effects of the engineer's work receive due consideration. The importance of the human factor in production, labor problems, legal relationships, industrial organization and effective distribution as related to modern individual and social existence are germane in this schedule. In no case, however, is it anticipated to develop expertness along any particular line. The aim is to arouse interest in these activities. Specialization is to follow after the student's determination of his life's work.

Eligibility

Students of the sophomore and junior classes may elect the full-time plan, but no student may register for a full-time course which duplicates a course offered in his engineering curriculum. On this plan, the students attend school three additional periods of five weeks each, each year.

Divisions

Students electing this plan are assigned to Division "AA" or "BB." Division AA men enter the school with Division A and take the same work as is offered to the co-operative men for the first five-week period. At the end of that time, when the Division A men resume co-operative work, the AA men remain in school taking the first term of the liberal subjects. At the end of this five-week period, they return to the subjects of the engineering curriculum. This process is repeated each ten

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weeks until the students have had a total of four engineering periods and three full-time terms. The Division AA men, therefore, complete their classroom work for the year at the same time as the Division A men.

Division BB men enter with the men of Division B and take their co-operative plan subjects together for four alternate five-week periods. In the three intervening five-week terms, the BB men devote their time to the liberal subjects.

The School Year

The full-time student, during his sophomore and junior years, will attend school for thirty-five consecutive weeks beginning in September or October, complete all of the prescribed engineering curriculum for his department and fifteen weeks of study in administrative and liberal arts subjects each year. He will cover all the courses in the engineering curriculum with either Division A or B and in the five-week periods between the engineering periods while the co-operative student is at work, the full-time student will take the courses of administrative and cultural value. Each year there will be three terms of five weeks each devoted to such work.

Sophomores and juniors in Division A who elect the full-time plan will return to school September 14 and will complete their work May 15. Sophomores and juniors in Division B will return to school October 19 and will complete their work June 19.

All students, co-operative as well as full-time, are required to work with co-operating firms during the senior year beginning with the opening of the school year in September.

Training in Administrative Subjects

Each student, electing the full-time plan, will be given a thorough training in the theory of business management, business law, accounting, marketing, etc. The student electing this plan will receive his degree in one of the four recognized branches of engineering, assuring him the mastery of his professional field. In addition, he will have had instruction in the problems which confront the executive in business, and thus will be equipped to assume responsibilities of an administrative nature.

SCHOOL OF ENGINEERING

Broader Liberal Education

A common criticism that the engineer is made narrow by the strictness of his confinement to technical subjects during his college course does not apply to the full-time man, for, in addition to his professional subjects, he is given an opportunity to study such subjects as literature, psychology, sociology, etc.

Time for Selecting Plan

Each student must decide definitely at the close of school each year whether he intends to attend the Engineering School the following year under the co-operative or full-time plan, except for the senior year, in which all students attend on the co-operative plan.

Transfer of Plans

Students pursuing either plan may change from one to the other only at the beginning of the year except by special permission of the school authorities.

Credit Basis

Two credits are allowed for each full-time course successfully pursued for five weeks.

Credit Requirements

Students electing the full-time plan are required to carry successfully at least four (4) courses during each of their full-time terms. A student has the option of electing a fifth. An average minimum of eight (8) credits each five weeks or twenty-four (24) for the year must be obtained in the liberal subjects by full-time students.

Condition or Make-up Examinations in Liberal Courses

No condition or make-up examinations are given in the liberal courses. Students failing to receive a passing grade in one or more courses are required to repeat the work or substitute some other full-time course during the year in which the student is registered for full-time work. Deficiencies in the required number of credits in the full-time course cannot be made up by taking additional engineering practice. Neither

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can a deficiency in engineering practice be made up by substituting credit received for work done in the full-time subjects.

When to Elect Full-time Plan

Students planning to avail themselves of the opportunity afforded by the full-time plan are urged to take the work of both the sophomore and junior years. Some students for financial reasons are unable to pursue this work for more than one year. In such cases students are advised and urged to elect the full-time curriculum during the sophomore year. It will prove advantageous to follow this suggestion.

Opportunity for Work

The student on the full-time plan is free for seventeen weeks each year, from May to September, or from June to October. This provides an excellent opportunity for him to engage in remunerative employment, if he so desires.

Engineering Practice

Actual experience with co-operating firms is invaluable to graduates in Engineering. Therefore the full-time man, as well as the co-operative student, is required to attend school during his senior year on the co-operative plan.

Relation of School to Secondary Schools

This School is peculiarly adapted to the high school graduate with limited financial resources who has the ambition and ability to get ahead if given the opportunity.

This year the School has a student body made up of graduates of the following 317 schools:

Abington High School	Athol High School
Adams High School	Ayer High School
Alfred (Me.) High School	Bacon (Conn.) Academy
Allen Military Academy (Newton)	Bangor (Me.) High School
Amesbury High School	Bar Harbor (Me.) High School
Amherst High School	Barnstable High School
Annapolis Royal Academy	Bartlett High School (Webster)
(Granville Ferry, Nova Scotia)	Barton (Vt.) High School
Ansonia (Conn.) High School	Bassano (Canada) High School
Arlington High School	Belfast (Me.) High School
Aroostook Cent. Inst. (Me.)	Bellows Falls (Vt.) High School
Ashland High School	Belmont High School
Assumption High School (Worcester)	Berkeley Preparatory School

SCHOOL OF ENGINEERING

Berlin (N. H.) High School	East Bridgewater High School
Berwick (Me.) Academy	Easthampton High School
Beverly High School	East Hartford (Conn.) High School
Boston College High School	East Maine Conference Seminary
Boston English High School	(Bucksport, Me.)
Boston High School of Commerce	Emerson (N. J.) High School
Boston Latin High School	Everett High School
Boston Trade School	Exeter (N. H.) High School
Bourne High School	Fairhaven High School
Bradford (Vt.) High School	Fall River High School
Braintree High School	Farmington High School
Brandon (Vt.) High School	(Unionville, Conn.)
Brattleboro (Vt.) High School	Fitchburg High School
Brewster Academy	Fort Covington (N. Y.) High School
(Wolfeboro, N. H.)	Fort Fairfield (Me.) High School
Bridgeport (Conn.) High School	Foxboro High School
Bridgewater High School	Framingham High School
Brighton High School	Franklin Union (Boston)
Bristol (Conn.) High School	Gardner High School
Brockton High School	General Electric Training School
Bromfield High School (Harvard)	Gilbert School (Winsted, Conn.)
Brookline High School	Glastonbury (Conn.) High School
Brunswick (Me.) High School	Gloucester High School
Bulkeley High School	Good Will (N. Y.) High School
(New London, Conn.)	Grafton High School
Burlington (Vt.) High School	Greely Institute
Cambridge High & Latin School	(Cumberland, Me.)
Camden (Me.) High School	Greenfield High School
Canaan (Vt.) High School	Groton (Vt.) High School
Candia (Greece) High School	Groverland High School
Chapman Technical School	Hamilton High School
(New London, Conn.)	Hampstead (N. H.) High School
Chauncey Hall School (Boston)	Hanover High School
Chelmsford High School	Hartford (Conn.) High School
Chelsea High School	Haverhill High School
Chester (Conn.) High School	Hingham High School
Chicopee High School	Holbrook High School
Clinton High School	Holden High School
Cohasset High School	Holley (N. Y.) High School
Colby (N. H.) Academy	Houlton (Me.) High School
Concord (Mass.) High School	Howard High School
Concord (N. H.) High School	(W. Bridgewater, Mass.)
Cony High School (Augusta, Me.)	Hudson High School
Coxsackie (N. Y.) High School	Hudson (N. Y.) High School
Danbury (Conn.) High School	Huntington School
Danvers High School	Hyde Park High School
Dedham High School	Island Falls (Me.) High School
Deering High School	Island Pond (Vt.) High School
(Portland, Me.)	Ithaca (N. Y.) High School
Dorchester High School	Jamaica Plain High School
Douglas (Ariz.) High School	Jay (Me.) High School
Douglas (Md.) High School	Johnson High School (No. Andover)
Drury High School (No. Adams)	Johnson (Vt.) High School
Duxbury High School	Johnston (N. Y.) High School
East Boston High School	Jonesport (Me.) High School

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Joplin (Mo.) High School	Mt. Hermon School (Northfield)
Jordan High School	Nantucket High School
(Lewiston, Me.)	Nashua (N. H.) High School
Keene (N. H.) High School	Natick High School
Kennebunk (Me.) High School	Needham High School
Killingly High School	New Bedford High School
(Danielson, Conn.)	New Boston (N. H.) High School
Kimball Union Academy	New Britain (Conn.) High School
(Meriden, N. H.)	Newburyport High School
Kingston High School	New Hampton (N. H.) Lit. Inst.
Lawrence High School	New Haven (Conn.) High School
Leavenworth High School	New London (Conn.) High School
(Waterbury, Conn.)	New Milford (Conn.) High School
Lee High School	Newport (Vt.) High School
Leominster High School	New Port Township
Lewis (Conn.) High School	(Wanamie, Pa.)
Lexington High School	New Salem Academy
Lincoln (N. H.) High School	Newton High School
Lincoln High School	Newton Parochial School
(Paducah, Ky.)	Newton Vocational School
Livermore Falls (Me.) High School	Northampton High School
Los Angeles (Cal.) Poly. School	North Attleboro High School
Lowell High School	Northboro High School
Lowell Institute	North Brookfield High School
Lynn Classical High School	Northeastern Secondary School
Lynn English High School	North Easton High School
Madison (Me.) High School	Northfield High School
Malden High School	North Yarmouth (Me.) Academy
Manchester (N. H.) High School	Norton High School
Manning High School (Ipswich)	Norwalk High School
Mansfield High School	Norwell High School
Marblehead High School	Norwood High School
Marlboro High School	Old Orchard (Me.) High School
Marshfield High School	Old Town (Me.) High School
Maynard High School	Parsonfield (Me.) Seminary
McKinley High School	Pawtucket High School
(Washington, D. C.)	Peabody High School
Mechanic Arts High School	Penn Yan Academy (N. Y.)
Medfield High School	Pepperell High School
Medford High School	Peterboro (N. H.) High School
Medway High School	Pittsfield High School
Melrose High School	Plainville High School
Meriden (Conn.) High School	Plymouth High School
Merrill (Me.) High School	Portland (Me.) High School
Mexico (Me.) High School	Port Washington (N. Y.) High School
Middleboro High School	
Middlebury (Vt.) High School	Pratt High School (Essex, Conn.)
Middletown (Conn.) High School	Prince of Wales College
Milford High School	(Charlottetown, P. E. I., Can.)
Milo (Me.) High School	Proctor (Vt.) High School
Milton High School	Providence (R. I.) Tech. High School
Mohnton (Pa.) High School	
Monson Academy	Punchard High School (Andover)
Montpelier (Vt.) Seminary	Quincy High School
Morristown (N. J.) High School	Randolph (Vt.) High School

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Redondo Beach (Cal.) High School	Thetford (Vt.) Academy
Revere High School	Tilton (N. H.) Seminary
Richford (Vt.) High School	Torrington (Conn.) High School
Rindge Technical High School	Tourtellotte High School
Rockland (Mass.) High School	(Thompson, Conn.)
Rockland (Me.) High School	Townsend High School
Rockport High School	Troy (Vt.) Conference Academy
St. Albans (Vt.) High School	Uxbridge High School
St. Anselem (N. H.) Prep. School	Vassar (Mich.) High School
St. Johns (Mich.) High School	Waitsfield (Vt.) High School
St. Johns Prep. School (Danvers)	Wakefield High School
Salem High School	Walpole High School
Sanford (Me.) High School	Waltham High School
Saratoga Springs (N. Y.) High School	Wareham High School
Saugus High School	Warwick (R. I.) High School
Scarboro (Me.) High School	Washington (Conn.) High School
Scituate High School	Washington (D. C.) Tech. High School
Sharon High School	Watertown High School
Shead Memorial High School (Eastport, Me.)	Wellesley High School
Shelton (Conn.) High School	Wentworth Institute
Skowhegan (Me.) High School	Westboro High School
Solon (Me.) High School	Westfield High School
Somersworth (N. H.) High School	West Hartford (Conn.) High School
Somerville High School	Westminster High School
South Amboy (N. J.) High School	Weston High School
South Manchester (Conn.) High School	West Peabody High School
South Orange (N. J.) High School	West Roxbury High School
South Royalston (Vt.) High School	West Springfield High School
Spaulding (Vt.) High School	Weymouth High School
Springfield Central High School	Whitman High School
Springfield Technical High School	Williston Seminary (Easthampton)
Springfield (Vt.) High School	Wilmington High School
Stafford (Conn.) High School	Wilton (Me.) Academy
Stephens (Me.) High School	Winchester High School
Stevens (N. H.) High School	Windsor (Conn.) High School
Stoughton High School	Winter Harbor (Me.) High School
Stow (Mass.) High School	Winthrop High School
Stow (Vt.) High School	Woburn High School
Stratford (Conn.) High School	Worcester Classical High School
Sumner High School	Worcester Commercial High School
Sutton High School	Worcester (North) High School
Swampscott High School	Worcester (South) High School
Symferopol (Russia) School	Wrentham High School
Taunton High School	Yarmouth (Me.) High School
Thayer Academy (So. Braintree)	Yonkers (N. Y.) High School
	York (Me.) High School

NORTHEASTERN UNIVERSITY

ENGINEERING EQUIPMENT

Field Instruments of Civil Engineering

For work in the field, the Civil Engineering Department possesses various surveying instruments, representing the principal makes and types in general use.

The equipment includes four surveyor's compasses, two Keuffel & Esser transits, five Buff & Buff transits, one Buff & Buff triangulation transit, two Hutchinson transits, one Poole transit, two Berger levels, two Keuffel & Esser levels, one Bausch & Lomb precise level, two Gurley plane tables, two Buff & Buff plane tables, and two Keuffel & Esser plane tables.

There are Locke hand levels, lining rods, leveling rods, stadia rods, engineers' and surveyors' chains, steel and metallic tapes, and all the miscellaneous equipment necessary to outfit the parties that the instruments will accommodate. The transits are equipped for astronomical observations. For higher surveying there is an aneroid barometer for barometric leveling, an Invar tape, a sextant for hydrographic surveying, and a Gurley electric current meter for hydraulic measurements.

The extent of the equipment and scope of the field work itself are designed to train the student's judgment as to the relative merits of the various types of field instruments.

Mechanical Laboratories

The Mechanical Engineering Department has a well equipped laboratory, containing new and modern machines run by steam, gas, water, and electricity.

Under the steam apparatus located in the laboratory may be included a fifty-horsepower uniflow steam engine of the latest design on which a complete engine test may be run. This machine is equipped with a prony brake for measuring the output. A surface condenser is connected into the exhaust line with the engine. A Chicago steam-driven air compressor is set up so as to make complete tests on both the steam and air ends of the machine. This is also tied in with the surface condenser. A Warren steam pump is arranged to run a standard pump test, being connected with a low level jet condenser on the steam end and a rectangular weir on the water end for measuring the quantity of water delivered by the pump. A

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twelve-horsepower single stage steam turbine to which is direct connected an absorption dynamometer or water brake so as to run a complete test on the turbine unit is available. Other steam driven apparatus includes a steam pulsometer pump and a steam injector.

The hydraulic equipment in the laboratory includes a two-stage centrifugal pump with a dual drive or separate drive as may be desired. The drive is direct from a D. C. motor or else direct from a Lee single stage steam turbine. Other machines of a hydraulic nature are a triplex power pump, motor driven; a hydraulic turbine of the Pelton Wheel type, a triangular and a rectangular weir for measuring quantity of water, besides the necessary tanks, platform scales, and hook gages.

Under the gas laboratory equipment may be listed a Fairbanks-Morse ten-horsepower gas and oil engine, so set up that tests may be run using various kinds of fuels and complete test data obtained; a Ford automobile engine arranged to run tests with different fuels and carburetors; and a gasoline airplane engine for demonstration purposes.

The steam power plant is also available for testing purposes. The plant is equipped with a flow meter in the feed water line steam pressure gauges, scales, electrical meters, thermometers, indicators, Orsat apparatus, CO₂ recorder and other equipment necessary for complete power plant tests. The plant consists of four horizontal return tubular boilers, two of which are equipped for burning fuel oil and two for burning coal; various auxiliary appliances as feed water pumps, feed water heater, oil fuel pumps, and separators; and four three-wire generators, three of which are driven by Ridgeway reciprocating steam engines, and the fourth is direct connected to a Westinghouse Parsons turbine.

This places at the disposal of the students well-equipped, up-to-date engineering laboratories and enables them to carry on boiler tests, with both coal and oil as fuel, determine the efficiencies of various fuels, obtain the efficiency of modern reciprocating steam engines of different types and test air compressors, fans, pumps, water wheels and gas engines. This renders the student familiar with the various auxiliary appliances of a modern power plant. Apparatus is also available for slide valve setting, gauge testing, measuring flow of air, steam,

NORTHEASTERN UNIVERSITY

and water, prony brake testing, determining the quality of steam by means of a throttling calorimeter, test on air blower, and friction of drives.

Electrical Measurements Laboratory

This laboratory is equipped with apparatus of two distinct types, first that planned fundamentally for teaching the principles of measurement and, second, that which is used in teaching advanced standardizing methods as well as for keeping the instruments in daily use in the other laboratories, as well as in the power house, correct or properly calibrated.

It is supplied with two sets of small storage cells for 500-volt calibration work and a set of 500-ampere-hour cells for current work.

The apparatus used in the first portion of the work includes the customary devices used in such work as resistance measurements by Ohm's law, direct deflection and substitution methods, voltmeter methods for high resistance, insulation resistance, specific resistance, use of slide wire and Wheatstone bridges, electrostatic capacity, Poggendorf's method of E. M. F. comparison, loop tests for grounds, etc.

For the second type of work there is a laboratory standard Wheatstone bridge, two Kelvin bridges (one of the self-contained type), a Leeds Northrup type Carey-Foster bridge and equipment, two potentiometers with auxiliary apparatus of volt boxes, standard cells, standard shunts of 10, 100, and 500 amperes capacity, a set of resistance standards of Bureau of Standards and another of Reichsanstalt patterns; Weston standard current transformer, Weston laboratory standard triple range voltmeter, ammeter and wattmeter for alternating current work and all necessary galvanometers carried on Julius suspensions.

Last summer there were added, first a complete Reichsanstalt daylight type photometer equipment, and second a Westinghouse oscillograph with full equipment; also a capacity bridge working to one micro-micro-Farad. Micro ammeter, standard wave meter and other equipment for radio measurements; so that the laboratory is now ready for practically any work in electrical measurements outside the absolute determinations as carried on in National standardizing laboratories.

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The instrument room is supplied with 60 high grade General Electric Co. and Weston Electric Instrument Co. alternating current voltmeters and ammeters with a number of potential and current transformers, and with 8 polyphase and 12 single-phase indicating wattmeters each of double current and double voltage ranges.

For direct current working there are 54 voltmeters (of triple range) ammeters and millivoltmeters of the above makes. There are 30 standard shunts of ranges from 10 to 100 amperes with uniform drops of 50 millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, loading resistances, frequency indicators, power factor indicators, etc.

Electrical Engineering Laboratory

This laboratory is equipped with 48 generators and motors of different types, the size and voltage ratings being selected to reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that the various quantities it is desired to measure will be of reasonable dimensions.

Machines from 5 to 25 kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants generally.

For D. C. working, among others there are two sets of specially matched direct current 6-kilowatt, 125-volt compound generators, which will still work as shunt machines. One set is driven by a large Sprague motor with double extended shaft, the two generators being tied together by a coupling so that they may be used for "pump-back" testing. The other pair are driven individually by 10-kilowatt, 230-volt motors and used principally for parallel operation and similar work. A large 230-volt, 12-kw., 200 R. P. M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt and compound motors each fitted with brake wheels are used for routine motor testing.

For A. C. working there is a 15-kw. (80 per cent p. f.) 3-phase, 230-volt alternator driven at 60 cycles by a 25 H. P.

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Westinghouse motor, a 7.5 kw. special G. E. machine with special armature taps so that it may be used as single phase, two phase, three or six-phase synchronous motor.

Two 12-kw. (80 per cent p. f.) G. E. machines having each armature coil tapped out separately also giving the above phase arrangements, each driven by its own motor and available for use either as synchronous generators or as motors. A 5-kw. Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine. A G. E. single phase clutch motor, a type R. I. induction motor, a Wagner single phase motor; two Wagner motors arranged for concatenation control, two 5-kw. Holtzer three-phase synchronous converters, and a Westinghouse 7.5-kw. two-phase motor.

For transformers there are six single-phase G. E. type H units wound for 550 volts primary and 220/110 volts secondary. Two sets of transformers with Scott transformation taps, and a Type R. O. constant current transformer primary winding for 220/190 volts and secondary for 6.6 amperes, 310 volts maximum fitted with a load of 80 candle power 6.6-amperes, 60-watt nitrogen filled tungsten lamps, and a pair of 550/220, 110 volts G. E. three-phase transformers of 7.5-kva. capacity.

There is also a full equipment of necessary control and regulating appliances and 18 movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for setting up the various test combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the laboratory being found permanently wired up except as to its normal, self-contained circuits.

The laboratory equipment is steadily being added to throughout the school year as the occasion arises so that a complete up-to-date list cannot be given, also because as apparatus becomes obsolete it is discarded and replaced by the most recent type.

Power is supplied over a special set of feeders, by one or both of two special units in the power house which when on laboratory service are cut clear from any other service whatsoever and potential controlled from the laboratory.

There are also speed governors and Tirrell regulators, both

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A C and D C, capable of being used with any special machines found desirable at any particular time.

Chemical Laboratories

The laboratories are arranged in four units, one for each of the general branches of chemistry; *i. e.*, inorganic, analytical, industrial and organic. To meet the requirements of the inorganic work, the equipment has been very carefully selected. The laboratory for analytical work is well supplied with the usual apparatus, and also apparatus for special work. Connected with this laboratory is a modernly equipped balance room.

This special equipment includes a Freas electric drying oven, a Kimley electro-analysis apparatus, an Emerson bomb calorimeter, an Orsat apparatus for gas analysis, a Saybolt viscosimeter, New York State flash point tester, a MacKey oil tester, a Babcock milk tester, a Hoskins electric combustion furnace, a Shriver type filter press, a vacuum filter pump, a Holtzer Cabot motor generator unit, and an Allen-Moore electrolytic cell.

The laboratory for organic work is especially equipped with steam lines for distillation purposes, besides the usual steam baths, drying closets, vacuum and compressed air lines and hoods. The common chemicals, including acids, bases and salts, are available in the laboratories for general use at all times. At the end of one of the laboratories, conveniently located, is a fully equipped stock room, from which any other chemical or apparatus can be readily obtained.

Industrial Chemistry Laboratory

The laboratory for industrial chemistry is fitted for carrying out processes on a semi-industrial scale, providing ample opportunities for research.

The laboratory contains necessary equipment for verification of laws of filtration, agitation, heat control, gas absorption under varying manufacturing conditions. There is also included equipment for studying electrolytical processes including electrolysis, electroplating and electroforming.

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Design and Drafting Rooms

The School possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms are supplied with lockers containing the drawing supplies, and files containing blue prints, and photographs of machines and structures that represent the best practice.

Physics Laboratory

The Physics Department has a large laboratory completely equipped with all necessary apparatus for the experimental work that is required of the students, as well as that required for lecture demonstration. The apparatus and equipment includes verniers, levels, vacuum pump, spirometer, planimeters, spherometers, calorimeters, thermometers, pyrometer, sonometer, spectroscope, spectrometer, balances, standard gram weight, lecture table galvanometer, optical disk with all accessories, lenses, photometer, air thermometer, and a full set of weather bureau apparatus, including barograph, thermograph, hygrometer, barometer, maximum and minimum thermometers, etc. These give a wide range to the experimental work that can be done.

Libraries

Students of the School have available for their use the University Library, which includes a large collection of engineering texts, reference books, and current periodicals on engineering and scientific subjects, and in addition there is a general library of several thousands of carefully selected books. The reading room is open from 9.00 A.M. to 10.00 P.M. daily.

All members of the School have the privilege of taking books from the Boston Public Library, which offers a very unusual opportunity to our non-resident students. The School is within easy access to the Public Library, which enables students to have unlimited reference to engineering subjects at any time.

Still other libraries, such as the State Library, the library of the Massachusetts Historical Society, and the library of the American Academy of Arts and Sciences furnish re-enforcement in particular fields.

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Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium with its 12-lap running track, three basketball courts, wrestling, boxing, fencing and special exercise rooms, handball courts and bowling alleys, is one of the most complete in New England. The natatorium is one of the best in the country. It is in a separate building, having a glass roof, admitting abundant sunlight, and has a continuous supply of filtered salt water. The tank is 75 feet long and 25 feet wide. Adjoining the building is a large field equipped for athletics. Here are four tennis courts, outdoor gymnasium, basketball court, jumping pits and a track with a 100-yard straightaway; baseball and football fields. Interclass contests are arranged in basketball, baseball, tennis, indoor and outdoor athletics, and swimming. Intercollegiate games and meets are arranged with the leading colleges in the East.

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REQUIREMENTS FOR ADMISSION

General Requirements

To pursue successfully one of the regular curriculums, the student should have completed a four-year course of study in an accredited high school of high scholastic standards. The requirements of age and scholarship are regarded as the minimum and only exceptional circumstances will justify an abridgment. Parents and guardians should bear in mind that it is generally of enduring advantage to the student if he does not enroll under the age of sixteen. Every applicant must furnish references as to his character and ability. In addition thereto he must present evidence that it is reasonable to assume that he will make a success of both his school work and engineering practice. He must possess mental and physical ability and a determination to work hard.

Students who have not completed a high school course in Physics are required to pursue during their freshman year an extra introductory course in Physics.

One year of high school physics will be required of all applicants for admission after the school year 1925-1926.

Requirements for Admission to the Freshman Class

Students are admitted to the freshman class in all curriculums at the opening of the school year in September and at mid-year. The applicant to be accepted as a regular student and as a candidate for the degree must present evidence of graduation from an accredited high school or the equivalent, and to have included in his course of study five (5) Required Units and ten (10) of the Elective Units listed below. The diploma of an accredited high school is accepted as evidence of scholastic qualification for admission, if the applicant has been graduated in the scientific, classical, or college preparatory course and has included the five required units. A unit is the credit given to a secondary school subject performed during four or five periods, of not less than forty minutes, a week throughout an entire school year, except English, in which case one year's work is equivalent to three-fourths of a unit. Credit in units is never allowed on certificates of tutors. Certificates of entrance examinations passed for admission to other

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colleges and technical schools may be accepted in lieu of entrance examinations. The Committee on Admission reserves the right to require a candidate to present himself for examination in any subject that the Committee on Admission may deem necessary. Credits offered in fulfilment of the entrance requirements cannot again be applied in lieu of credits which are ordinarily received during the college course. Students who obtain admission by certificate and later show a marked deficiency in entrance requirements may be classified with students having entrance deficiencies.

Entrance conditions may be permitted to the extent of two units only, a minimum of thirteen units being required for conditioned admission to the freshman class. Conditions must be removed previous to taking up sophomore work.

Specific Requirements for Admission

The applicant must offer all of the Required Subjects listed below:

<i>Required Subjects</i>	
English	3 Units
Algebra	1 Unit
Geometry	1 Unit
Total	<hr/> 5 Units

A minimum of ten units from the following list of Elective Subjects must be offered by the applicant.

<i>Elective Subjects</i>			
Trigonometry	½ Unit	Greek	1 to 4 Units
Civics	½ "	French	1 " 3 "
*Physics	1 "	German	1 " 3 "
Chemistry	1 "	Spanish	1 " 3 "
Zoology	1 "	Ancient History	1 Unit
Physical Geography	1 "	Medieval & Modern	
Astronomy	½ "	History	1 "
Mechanical Drawing	½ " per yr.	English History	1 "
Manual Training	½ " " "	American History	1 "
Physiology	1 " " "	Solid Geometry	½ "
General Science	1 " " "	Higher Algebra	1 "
Bookkeeping	½ " " "	Biology	1 "
Latin	1 to 4 Units	Botany	1 "

*Required after the school year 1925-1926.

The school recognizes the fact that other subjects are credited toward graduation by secondary schools. It will, therefore, accept as a part of the ten units in the elective group certificates for work in such subjects.

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Special Students

In exceptional cases students who are not high school graduates may be allowed to enter as special students, but only after their cases have been favorably passed on by the Committee on Admission.

Application for Admission

Each applicant for admission to the School is required to fill out an application blank, whereon he states his previous education, as well as the names of persons to whom reference may be made in regard to his character and previous training.

An application fee of five dollars (\$5) is required when the application is filed. This fee is non-returnable if the applicant is accepted. If he is rejected, one-half the fee will be returned upon request.

The last page of this catalog is in the form of an application blank. It should be filled out in ink and forwarded with the required five dollar fee to Carl S. Ell, Dean, 316 Huntington Avenue, Boston, Mass.

Upon receipt of the application, properly filled out, the School at once looks up the applicant's references and high school records. When replies have been received to the various inquiries instituted, the applicant is at once advised as to his eligibility for admission to the School.

Immediate Assignment to Engineering Practice

If a student, before entering his academic work, wishes to be assigned by the School to a position, he is required to fill out a registration card. A payment of forty dollars (\$40) on tuition must be paid before he will be assigned to any position at engineering practice.

Before any student shall be allowed to attend classes, he shall have made the first tuition payment. This is in addition to the application fee of five dollars (\$5) and all other fees, and may be paid at any time before school opens.

Subjects for Examination

Applicants who have not satisfactorily passed algebra to quadratics and plane geometry in their course of study in high school are required to pass entrance examinations in these subjects.

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By writing the School, prospective applicants may receive copies of former entrance examinations. These copies are available for distribution and may be obtained at any time.

Entrance Examinations in Boston

Examinations for admission to the freshman class will be held at 316 Huntington Avenue in January, June and September of each year.

Students are advised to attend the January or June examinations, if possible, in order that any deficiencies then existing may be made up in September.

The time of examinations is as follows:

10:00 A.M. to 12 M., English,

10:00 A.M. to 12 M., Algebra,

1:00 P.M. to 3:00 P.M., Plane Geometry.

During the current year the examinations will be given on the following days: January 15, 1925; June 11, 1925; Sept. 10, 1925; January 21, 1926.

All other examinations by special assignment.

No fees are to be paid at the time of the examination.

Preparatory Schools

Day and evening preparatory schools are conducted in conjunction with Northeastern University. Students having entrance conditions, or requiring further preparation for the entrance examinations, may avail themselves of this opportunity to cover the desired work.

Provisional Acceptance

When, for any reason it is deemed advisable, the School reserves the right to place any entering student upon a period of probation, extending from five to twenty weeks. Whether he shall be removed from probation at the end of this time or requested to withdraw will be determined by the character of the work he has accomplished and his conduct during this probationary period.

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DETAILED INFORMATION

Location

The School is housed in the three buildings of the Association, the Vocational Building on St. Botolph St., in the rear of the Main Buildings, and the Huntington Building opposite the Main Buildings.

The buildings are located on Huntington Avenue, just beyond Massachusetts Avenue, and are within easy access to the various railroad stations, and the business and residential sections. A map is shown on page 64.

Transportation

The chief railroad centers of Boston are the North and South Stations. From the North Station board a car going to Park Street at which junction transfer to any Huntington Avenue car which will discharge you close to the main entrance of the school building. At South Station board a Cambridge subway train for Park Street Under, there change to a Huntington Avenue car and alight at Gainsborough Street a short distance from the Main Building of Northeastern University.

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, especially during periods in school, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense.

Residence in Boston is advisable as it gives the student opportunity to use the college facilities outside of class hours, and to confer more easily with his instructors about his college work. It also gives him a wider range in the choice of a co-operating position, since he can readily report for early work if necessary, which is often impossible if the student lives at a distance from Boston. Moreover, residence in Boston gives the student close connection with the activities of college life.

Dormitories

At present the School does not maintain dormitories, however provision is made to secure rooms in the vicinity of the School or in the Y. M. C. A. dormitory—whenever possible—

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for all students who desire such reservation. For information relative to housing write the Director of Housing.

We are compelled to make arrangements with the landladies who furnish accommodations for our students. The School endeavors to exercise due consideration and care for the student's welfare while in residence at school. These combined facts necessitate the adoption of rules and regulations presented herewith.

1. Assignments will be made when the student registers.
2. Students may inspect rooms before accepting an assignment; after reaching a decision same must be reported to the office of the Director of Housing, Room 463M.
3. Students who accept room assignments must retain same for the period of their residence during 1925-1926, unless given permission, by the Director of Housing, to change.
4. SECTION 1. All students living in Boston,—whether assigned by the Director of Housing or securing accommodations without such aid—must fill out a room registry card in the office of the Director of Housing. This does not apply to students living at home.

SECTION 2. Students living at home or with relatives must notify the Director of Housing if a change is made which involves rooming elsewhere than at home or with relatives.

5. Rooms secured by students will be inspected; if disapproved by the committee, the student will be requested to find other accommodations or to accept assignment by the School.

6. Students are expected to observe the general accepted decencies of life and proprieties of American citizenship.

7. Violation of any of the above rules is considered a breach of discipline and will be dealt with accordingly.

School Year

The First Semester for Division A begins each year on the second Monday in September, this constituting the beginning of the school year for all students. The second Summer Term for freshmen follows the vacation period and closes the official school year.

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Scholastic Year for Seniors

Seniors of either division, who are candidates for a degree in the current year, must have completed all academic work; class assignments, theses, regular and special examinations, before twelve o'clock noon of the Saturday next following the close of recitations for seniors, but in no case will the interval allowed be less than one week.

Attendance

Students are expected to attend all exercises in the subjects they are studying unless excused by the Registrar. Students who are absent from the first school exercise after a holiday or recess period are required to pay a fine of two dollars (\$2). Exercises are held, and students are expected to devote themselves to the work of the School, between 9.00 A.M. and 5.00 P.M. except for an hour lunch period, on every week day except Saturday. Saturday classes are held only between 9.00 A.M. and 1.00 P.M.

Four-Year Curriculums

The School offers four-year college curriculums of study, in co-operation with engineering firms, in the following branches of engineering, leading to the Bachelor's Degree:

1. Civil Engineering
2. Mechanical Engineering
3. Electrical Engineering
4. Chemical Engineering
5. Administrative Engineering.

Descriptions of the curriculums and schedules showing the subjects of instruction included will be found on succeeding pages.

Tuition Fees

The tuition fee in each curriculum is one hundred and seventy-five dollars (\$175) a year for each of the four years for all freshmen and for upper class men on the Co-operative Plan. The tuition for freshmen is payable as follows:

DIVISION A

<i>School Periods</i>	<i>Tuition Due</i>
Sept. 14, 1925, to Jan. 30, 1926	\$100 Sept. 14, 1925
and	\$50 Dec. 7, 1925
Aug. 16, 1926, to Sept. 11, 1926	\$25 at beginning of summer term work.

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DIVISION B

School Periods

Feb. 1, 1926, to June 19, 1926
and
June 21, 1926, to July 17, 1926

Tuition Due

\$100 Feb. 1, 1926
\$50 April 26, 1926
\$25 at beginning of
summer term work.

The tuition for upper classmen on the Co-operative Plan is payable as follows: Sixty dollars (\$60) at the beginning of the first school period; fifty dollars (\$50) at the beginning of the second school period; fifty dollars (\$50) at the beginning of the third school period; and fifteen dollars (\$15) at the beginning of the fourth school period.

The tuition fee in each curriculum for full-time students is two hundred and twenty-five dollars (\$225) a year and is payable as follows:

DIVISION AA

School Period

Sept. 14, 1925 to May 15, 1926

Tuition Due

\$60 Sept. 14, 1925
\$60 Nov. 23, 1925
\$60 Feb. 1, 1926
\$45 April 12, 1926

DIVISION BB

School Period

Oct. 19, 1925, to June 19, 1926

Tuition Due

\$60 Oct. 19, 1925
\$60 Dec. 28, 1925
\$60 Mar. 8, 1926
\$45 May 17, 1926

Students who are registered for more school work than that prescribed in the catalog for the year in which they are enrolled, are charged two dollars (\$2) an hour per semester. In computing additional hours, the catalog schedules are used and both hours of exercises and hours of preparation are counted.

Failure to make the required payments on time, or to arrange for such payments, is considered sufficient cause to bar the student from classes or suspend him from engineering practice until the matter has been adjusted with the Bursar.

Membership in the Y. M. C. A.

The yearly tuition fee includes membership in the Boston Y. M. C. A. This fee is not included in the tuition for special summer term students.

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LABORATORY FEES AND DEPOSITS

Chemical Laboratory

All students taking chemical laboratory work are required to make a deposit of ten dollars (\$10) at the beginning of each year, from which deductions are made for breakage, rentals, and destruction of apparatus in the laboratory. Any unused portion of this deposit will be returned to the student at the end of the school year. In case the charge for such breakage, rentals or destruction of apparatus is more than ten dollars (\$10), the student will be charged the additional amount.

Students enrolled in the curriculums in Chemical Engineering will be charged a laboratory fee in accordance with the following rates:

	<i>Course</i>	<i>Fee</i>
41-2	Inorganic Chemical Laboratory.....	\$10.00
42-2	Qualitative Analysis Laboratory.....	10.00
43-2	Quantitative Analysis Laboratory.....	10.00
44-2	Technical Analysis Laboratory.....	5.00
45-2	Organic Chemical Laboratory.....	10.00
45-4	Organic Chemical Laboratory.....	10.00
47-2	Industrial Chemical Laboratory.....	5.00

Electrical Laboratory

Students taking electrical laboratory work will be charged a laboratory fee in accordance with the following rates:

	<i>Course</i>	<i>Fee</i>
30-4	Applied Electricity Laboratory.....	\$ 5.00
32-4	Electrical Engineering II Laboratory.....	5.00
32-6	Electrical Engineering III Laboratory.....	5.00
32-8	Electrical Engineering IV Laboratory.....	10.00
33-2	Electrical Measurements Laboratory.....	5.00

These fees are intended to cover power, normal wear in use of equipment, other than measuring instruments, fuses, etc. In no case do they cover damage to instruments caused by misuse or carelessness of any kind on the part of students. In such case the repair cost will be assessed equally upon the members of the group concerned.

Physics Laboratory

Students taking courses in the physics laboratory will be charged a laboratory fee of \$2 per year.

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Engineering Laboratory

Students taking courses in engineering laboratory will be required to pay a laboratory fee of \$2 per year.

Testing Materials Laboratory

Students enrolled in the course in testing materials laboratory are charged a laboratory fee of \$2 per year.

Student Activities Fee

Each student in the School is charged a student activities fee of fifteen dollars (\$15). Freshmen pay \$10 of this fee at the time of registration and \$5 with the second payment on tuition. Upper class men pay five dollars (\$5) on this fee at the time of each of the first three payments on tuition. This fee supports certain student activities, and includes membership in the *Northeastern University Athletic Association*, subscription to the *Northeastern Tech*, the school paper, and subscription to the *Cauldron*, the college year book. The services of a physician are also available under this fee. Only minor ailments, however, are treated. Should the student show signs of more serious illness, he is immediately advised to consult a specialist or return to his home, where he can get more adequate treatment.

Payments

All payments should be made to Galen D. Light, Bursar.

All checks should be made payable to The Bursar, Northeastern University.

Refunds

The University assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis, therefore no refunds are granted except in cases where students are compelled to withdraw on account of personal illness.

Books and Supplies

All supplies may be purchased from the University Book Store at a cost of twenty (\$20) to thirty (\$30) dollars per year. Supplies for the freshman year aggregate somewhat more be-

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cause a set of drawing instruments must be obtained. The earnings of the students for their services with the co-operating firms considerably exceed the cost of tuition, fees, books, supplies, and incidental expenses. The purchase of supplies is therefore not a burden to the student.

**TABULAR SUMMARY OF APPROXIMATE SCHOOL EXPENSES PER YEAR CO-OPERATIVE PLAN*

<i>Item</i>	<i>Low</i>	<i>Average</i>	<i>High</i>
†Matriculation Fee.....	\$ 5	\$ 5	\$ 5
Tuition.....	175	175	175
Student Activities Fee.....	15	15	15
Room Rent (20 weeks).....	65	80	105
Board (20 weeks).....	130	175	215
Books and Supplies (exclusive of Drawing Instruments).....	20	25	30
Laundry (20 weeks).....	10	20	30
†Laboratory Fees.....	15	20	25
Incidentals (20 weeks).....	15	35	75
Total.....	\$450	\$550	\$675

*Compiled from expense returns made by the student body.

†Payable first year only.

‡Required only in certain courses; see pages 56, 57.

**TABULAR SUMMARY OF APPROXIMATE SCHOOL EXPENSES PER YEAR FULL-TIME PLAN*

<i>Item</i>	<i>Low</i>	<i>Average</i>	<i>High</i>
†Matriculation Fee.....	\$ 5	\$ 5	\$ 5
Tuition.....	225	225	225
Student Activities Fee.....	15	15	15
Room Rent (35 weeks).....	105	130	180
Board (35 weeks).....	230	300	380
Books and Supplies (exclusive of Drawing Instruments).....	30	35	40
Laundry (35 weeks).....	18	35	50
†Laboratory Fees.....	15	20	25
Incidentals (35 weeks).....	20	50	100
Total.....	\$663	\$815	\$920

*Compiled from expense returns made by the student body.

†Payable first year only.

‡Required only in certain courses; see pages 56, 57.

Students' Self-Help

Students who find it necessary to accept part-time jobs, while attending school, may through the Engineering Practice Department obtain part-time work doing odd jobs.

No student is justified in assuming that the Engineering Practice Department will "take care of his expenses" or

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guarantees to supply him with work sufficient to meet all his needs.

A student should have on hand at the time of registration a reserve fund adequate to provide for immediate needs or unexpected contingencies. This should ordinarily amount to at least the first year's tuition plus the student activity and other fees, room rent and board for several weeks or a total of about \$300.

Elective Subjects

Students electing courses not included in their curriculum will be required to take all examinations in such courses and to attain a passing grade in them before they will be eligible for a degree.

Status of Students

The ability of students to continue their courses is determined by means of classroom work and examinations, but regularity of attendance and faithfulness to daily duties are considered equally essential.

When a student elects a curriculum, he is required to complete all courses included therein in order to graduate. No subject is to be dropped, or omitted, without the consent of the Administrative Committee and the approval of the Dean.

Any student failing to make a satisfactory record, either in school or practical work, may be removed from his position in practical work, or from the School.

Students transferring from approved colleges will be admitted to advanced standing provided their record warrants such a procedure. Whenever a student enters with advanced standing and later proves to have inadequate preparation in any of his pre-requisite subjects, the Faculty reserves the right to require the student to repeat in class the subjects in question.

A special student is permitted, subject to the approval of the Faculty, to register for and take such courses as the School offers. However, special students are not eligible for a degree.

Examinations

Examinations covering the work of the term are usually held at the close of each term. Exceptions may be made in

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certain courses where, in the opinion of the instructor, examinations are not necessary.

Condition examinations will be given in all subjects during the week of July 12, 1926, and the week of September 6, 1926. Condition examinations are not given for courses in which no final examination was given.

Special examinations may be arranged for only by vote of the Administrative Committee and for all such examinations the University requires the payment of a special fee of five dollars (\$5).

Probation

Students are placed on probation either by the Executive Committee or the Administrative Committee. Failure to show proper respect for constituted authority; infringement of the rules and regulations of the college; disregard of obligations to a co-operating firm, etc., constitute insubordination. All matters of insubordination are handled by the Executive Committee and the penalty for such may be probation or expulsion from the University.

Failure to meet the standards set by the Administrative Committee, unless the failure is supported by causes wholly beyond the student's control, will necessitate the Committee placing the student on probation.

Removal from probation is in the hands of the committee placing the student thereon.

Rules of Standing in Scholarship

A student's grade is officially recorded by letters and percentages, as follows:

A, excellent, 90-100 per cent.

B, good, 80-89 per cent.

C, fair, 70-79 per cent.

D, passable, 60-69 per cent.

F, failure, work unsatisfactory, 40-59 per cent.

FF, complete failure, below 40 per cent.

I, incomplete.

A mark of F in any particular subject entitles the student to make up the unsatisfactory work, or to take a condition examination. This letter is given for all grades below 60 per cent on intermediate reports.

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A mark of FF denies the privilege of taking a condition examination, and the course must be repeated.

A mark of I is used for intermediate grades only and signifies that the course may not have progressed sufficiently far to give a grade or that the student has not had time to make up work lost through excusable enforced absences from class.

A student who does not remove a condition before that course is again scheduled, a year later must repeat the course. A condition in more than one subject involves the loss of the privilege of being a candidate for graduation with the student's class, and may involve the loss of assignment to engineering practice.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

No student may qualify as a candidate for a degree in any given year unless clear in all the required subjects of the lower years of his chosen curriculum. He must also be in good standing in all courses for which he is enrolled.

Entrance requirements or preparatory subjects pursued in the School are considered as required school work.

Absences

No "cuts" are allowed. A careful record of each student's attendance upon class exercises is kept. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subject or subjects from his schedule and the listing of these as conditioned subjects. In case he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work: but he must complete the work at such time and in such manner as his instructor in the course may designate.

Laboratory work can be made up only when it is possible to do so during hours of regularly scheduled instruction. Absences from exercises immediately preceding or following a recess are especially serious and entail severe penalties.

Attendance at all mass meetings of the student body is compulsory. Exceptions to this rule are made only when the student has received permission from the Director of Student

NORTHEASTERN UNIVERSITY

Activities, previous to the meeting from which he desires to be absent.

Report Cards

Reports are issued four times a year, one at the end of each five-week school period. In addition, a special report on the subjects pursued during the summer term will be issued immediately at its close. Questions relative to grades are to be discussed with the student's faculty adviser.

Students are constantly warned and advised to maintain a grade of work which is of acceptable quality. Parents and students are always welcomed by the Dean, the Registrar, and advisers for conference upon such matters. Special reports on a student's work will be sent to parents at the end of each five-week school period.

Parents or guardians will be notified in all cases when students are advised or required to withdraw from the School.

Conduct

It is assumed that students come to the School for a serious purpose, and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building, or to any of the furniture, apparatus, or other property of the School, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the School.

Students are expected to observe the accepted rules of decorum, to obey the regulations of the School, and to pay due respect to its officers. Conduct inconsistent with the general good order of the School, or persistent neglect of work, if repeated after admonition, may be followed by dismissal, or, in case the offense be a less serious one the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of any further offense.

It is desired to administer the discipline of the School so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present, as his own, any work which he has not performed, or to pass any

SCHOOL OF ENGINEERING

examination by improper means, is regarded as a most serious offense, and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Advisers

Each student is assigned to a faculty adviser, who takes an active interest in the student's welfare, guiding and assisting him in the satisfactory pursuit of his studies, keeping close watch on all matters which tend to hamper the student in his college life and preventing such in so far as possible.

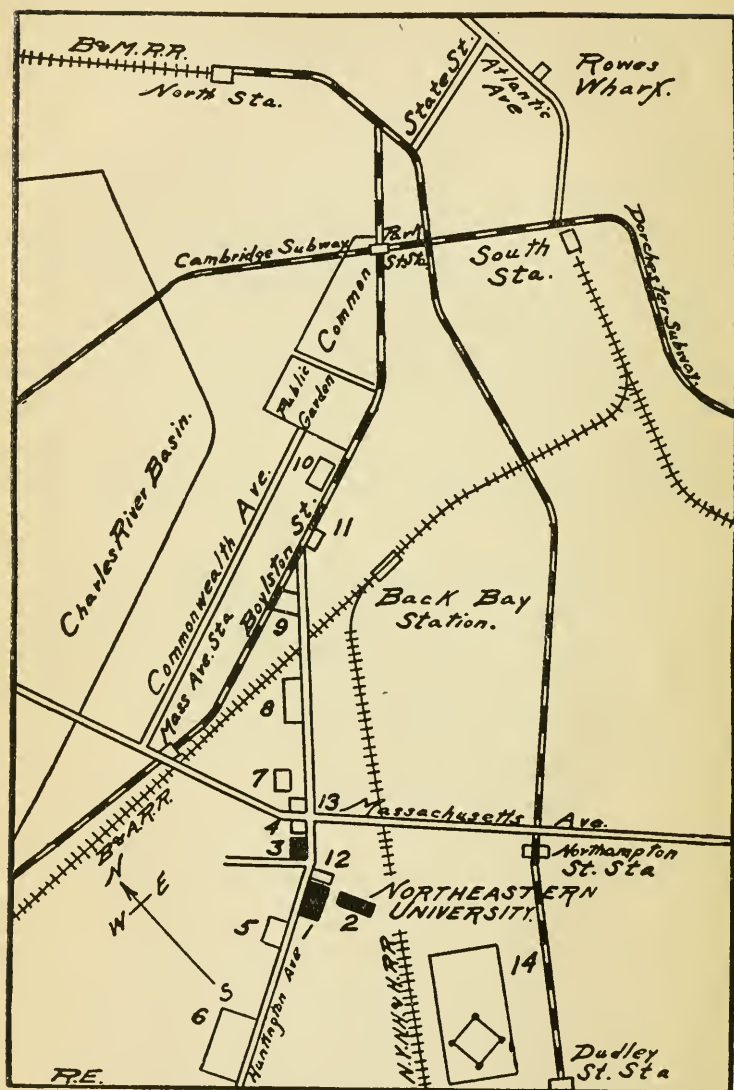
The function of the adviser to upper classmen is somewhat different and tends more toward consultation and suggestion bearing on the student's plans and probable work after graduation.

Men engaged in student activities are assigned to special advisers, who keep a constant watch over the academic progress of the student.

Relation of Students to General Public

Non-resident students are temporarily guests of Boston and therefore must respect the wishes, rights, and laws of the public, whose hospitality the students accept. If accused of conduct unbecoming a gentleman and such accusation be substantiated upon investigation, the offender may be suspended or expelled from the School.

SCHOOL OF ENGINEERING



MAP OF IMMEDIATE VICINITY
(For key see next page)

SCHOOL OF ENGINEERING

1. ADMINISTRATION BUILDING
BOSTON Y. M. C. A.
2. VOCATIONAL BUILDING
3. HUNTINGTON BUILDING
4. SYMPHONY HALL
5. BOSTON OPERA HOUSE
6. BOSTON MUSEUM OF FINE ARTS
7. CHRISTIAN SCIENCE CHURCH
8. MECHANICS EXHIBITION HALL
9. BOSTON PUBLIC LIBRARY
10. MUSEUM OF NATURAL HISTORY
11. TRINITY CHURCH
12. NEW ENGLAND CONSERVATORY OF MUSIC
13. HORTICULTURAL HALL

NORTHEASTERN UNIVERSITY

STUDENT ACTIVITIES

A moderate participation in social and athletic activities is encouraged by the Faculty, although a standard of scholarship which is incompatible with excessive devotion to such pursuits is required of all students.

Student Activities Committee

This committee, consisting of the treasurers elected in the various classes, has general supervision over all social functions of the School. It aims to further the interests of such organizations as the orchestra, band, glee and banjo clubs, chess club, radio club, and other groups which do not come under the jurisdiction of any special body. The committee has supervision of a Student Activities Room, a club room for all members of the School. Here the various clubs may hold their meetings, and the individual may spend his time outside of class room either in study or recreation. In order to provide for the social intercourse of the students, as well as to enable the men in the different divisions to meet one another, socials and entertainments are held at such times as are convenient for all to attend.

Northeastern University Athletic Association

The Athletic Association consists of all students in the Schools of Engineering and Business Administration.

At the head of the Association is the Faculty Committee on Athletics, appointed by the Deans of the Schools. This committee must approve all general policies in regard to athletics, in particular, schedules and absences from school due to athletics. The General Athletic Committee, consisting of certain members of the Faculty and the coaches and captains of the various teams, has charge of the administration of athletics.

Under the guidance of efficient athletic coaches; track, basketball, baseball, soccer, and wrestling teams are formed. Schedules are arranged with other colleges for home games and games abroad. Interclass baseball, tennis, swimming, and other sports are also encouraged. Interclass and interdivision meets are held during the year.

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Mass Meeting

Every Friday, from 12 to 1, mass meetings are held. Attendance at these meetings is compulsory. The second and fourth mass meetings of each five-week period are, as a rule devoted to a lecture by some prominent visitor. The first, third, and fifth mass meetings of each period are under the direction of the Department of Student Activities.

The "Northeastern Tech"

The students issue a weekly paper called the *Northeastern Tech*. Here the students have an opportunity to express their opinions on subjects relating to study, engineering practice, social events, or topics of the day. In addition, college news, editorials, and official announcements make this feature of activities very valuable. Positions on the editorial and business staffs of the paper are attained by competitive work.

"The Cauldron"

"The Cauldron" is the year book of the School. The Senior Class is responsible for its publication, the members of the staff are chosen through competitive work. The book is ready for distribution in the latter part of the second semester. It contains the usual review of the year's work and activities, a complete history of all classes in the School, all their functions, socials, pictures, etc. It also contains a complete biographical sketch of each member of the graduating class, therefore is a souvenir highly prized in later years by graduates.

The Handbook

Issued at the beginning of each year, the purpose of the Handbook is to help promote an early intimacy with the scope of college life. The book is of special interest to new men as it contains detailed information concerning all the organizations of the School. Schedules, a daily diary, songs, cheers, and important dates in the college calendar make the book of great value to upper classmen.

Student Activities Fund Committee

In order to help finance the foregoing student activities, a Student Activities Fund Committee has been formed, con-

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sisting of the Chairman of the Student Activities Committee, the Editor-in-Chief of *The Northeastern Tech*, and the Secretary of the Athletic Association. Members of the Faculty interested in these branches of the activities are also on this committee. The committee apportions the student activities fee among the various activities.

Student Council

This is the student governing body and consists of members elected from each curriculum and from each class, as well as the leaders of the various classes, organizations, clubs, and teams. It acts as the supreme governing body. It has jurisdiction, under proper supervision of the Faculty, over all student matters, such as customs, privileges, and such other matters as can properly be decided upon by such a body.

The Senate

The Senate is an honorary society composed of men who have shown exceptional ability both by high scholastic standing and a live interest in student activities.

The Inter-Fraternity Council

Elected representatives from each fraternity, as well as a non-fraternity representative from each division, make up the Inter-Fraternity Council. This body has preliminary jurisdiction over laws governing the regulation of fraternities and clubs in the School.

Professional Societies

The students in the various curriculums are organized as a professional society, known as the Northeastern University Engineering Society, for the closer association of the students of the School, and for the discussion and consideration of various problems and new knowledge in the engineering field, which would not ordinarily come into their regular courses. Meetings are held every week at which the society is addressed by members of the society and by engineers of prominence.

There are four sections of the society, the Civil, Mechanical, Electrical, and Chemical Engineering Sections. These sections are affiliated either by individual membership or as a section

SCHOOL OF ENGINEERING

with the Boston Society of Civil Engineers, the American Society of Mechanical Engineers, the American Institute of Electrical Engineers, and the American Chemical Society, thereby procuring for the individual that most valuable association with the successful practicing engineers of the community, and the various problems discussed by them.

Annual Prizes

Prizes are awarded annually for excellence in the various departments of school activities. Such prizes should stimulate the interest of the student to attain a high proficiency in some branch of undergraduate endeavor.

Public Speaking

Cash prizes of fifty, twenty-five, ten, and three prizes of five dollars each are offered yearly by Arthur S. Johnson, the Chairman of the Board of Trustees, for excellence in the presentation of original speeches before the School at a regular student mass meeting. All students are eligible to compete for these prizes. The regulations for the contests are published in the *Northeastern Tech* early in the year.

Engineering Conferences

The Department of Engineering Practice awards annually silver trophy cups to two men in each of the professional departments who deliver the best addresses upon engineering topics before regular meetings of the engineering society. All regular juniors and seniors are eligible to compete for these cups.

The Northeastern Union

Northeastern University is conducted by the Boston Y. M. C. A., and though non-sectarian, it is thoroughly Christian in character. The purpose of the Northeastern Union is to carry out the work of the Christian Association within the University. It endeavors to deepen the spiritual lives of Northeastern men through the building of Christian character, to create and promote a strong and effective Northeastern University spirit in and through a unified student body, to promote sociability within the school, and to em-

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phasize certain ethical, social, civic, intellectual, economic, physical, vocational, and avocational values.

All students are encouraged to participate in the activities of the Union, as no matter what their religious faith, the work of the Union is entirely non-sectarian. No attempt is made in any way to influence one to participate in any activities which are contrary to the tenets of any particular religion. A good moral character is the only requirement for eligibility to membership. It is hoped as many students as can will participate in this ideal extra curricula work.

The Union organizes various branches. One of its most conspicuous branches is the Social Science Organization, which endeavors to bring before the student body leading men who are foremost in the various branches of the social sciences. These talks are open to all members of the school body and are held at a time when the entire student body can attend.

Moral and Religious Influences

Many of the churches of Boston have cordially thrown open their doors to students providing special programs, discussions, hikes, conference hours and so forth.

Through the Northeastern Union students are informed of the location, hours of service, religious activities and special attractions of all the churches of Boston.

Northeastern University Club

The Northeastern University Club of Boston was organized in the spring of 1921, with graduates of the Schools of Law, Commerce and Finance, and Engineering as charter members.

The purpose of the Club is to promote social activities among the alumni of Northeastern University; to perpetuate the Northeastern spirit in the business life of the community; to give to their Alma Mater the benefit of the experience of the alumni in the School and of their experience in business and professional activities since their graduation.

Any man of good character, twenty-one years of age or over, who is a graduate of any of the Schools of Northeastern University granting a degree or who has attended such schools for a period of two full years is eligible for membership.

SCHOOL OF ENGINEERING

REQUIREMENTS FOR GRADUATION

The School grants the degrees of:

- Bachelor of Civil Engineering.
- Bachelor of Mechanical Engineering.
- Bachelor of Electrical Engineering.
- Bachelor of Chemical Engineering.
- Bachelor of Administrative Engineering.

To receive a degree in engineering the student must be a resident of the School for at least one year, immediately preceding the date on which he expects to graduate. He must complete the prescribed studies of the four years, and pass final examinations, if required, on subjects included in his curriculum. In addition to this, he must complete satisfactorily a schedule of engineering practice or full-time courses under the supervision of the Faculty. The student must, also, prepare a thesis as defined elsewhere in this catalog. All theses and records of work done in preparation of theses, are the permanent property of the School.

The credits required for the degree are as follows:

Engineering Curriculum	164 credits
Engineering Practice or General Subjects during sophomore and junior years	48 credits
Engineering Practice during senior year	<u>20 credits</u>
Total credits required for degree	232

All subjects in the engineering curriculum are required. One hundred and sixty-four credits are granted for the satisfactory completion of the equivalent of this curriculum. Twenty-four credits are granted for the satisfactory completion of one year's work at engineering practice during each of the sophomore and junior years, and 20 credits for work during the senior year. Two credits are granted for the satisfactory completion of each of the general subjects which are offered on the full-time plan. Credits are granted only at the close of the school year.

The degree of the School represents not only the formal completion of the subjects in the selected course of study, but also the attainment of a satisfactory standard of general efficiency. Any student who does not show in the fourth-year

NORTHEASTERN UNIVERSITY

work of his curriculum that he has attained such a standard, may be required, before receiving the degree, to take such additional work as shall prove his ability. A fee of \$10 is required of all candidates for a degree. This fee must be paid at the beginning of the second semester.

Graduation with Honors

Honors are based upon excellence of scholarship maintained by students while in residence. Two honorary distinctions are conferred upon properly qualified students at graduation.

1. Those who complete all scholastic work with an average above ninety per cent are graduated **WITH HIGH HONOR**.

2. Those who complete all scholastic work with an average between eighty and ninety per cent are graduated **WITH HONOR**.

Students graduating with honors must have been in residence at least two years immediately preceding graduation.

Positions Held by Graduates

The graduates of the School have been able to secure positions of high grade, commanding proportionate salaries. Positions as construction engineers, power plant engineers, electrical engineers, designing draftsmen, State and Federal employees under Civil Service, and instructors are now held by graduates of the School. The success of those who have been graduated from the School is the best evidence of the value and thoroughness of the training offered.

SCHOOL OF ENGINEERING

PROGRAM OF STUDIES

General Statement

The Engineering and Full-time Curriculums are given on the following pages. The first year, it will be observed, is practically the same in all curriculums. A few exceptions are made where students need special elementary training in their professional subjects, in order to be of more service to their employers while on engineering practice.

The regular school year comprises two terms of ten weeks, with an additional period of four weeks for freshmen. The first ten-week term for each division is called the First Semester; the second ten weeks, the Second Semester; and the additional four-week period for freshmen, the Summer Term.

Three additional periods of five weeks each are required of students on the full-time plan. These periods are known as First, Second and Third Terms, and occupy the intervals between the regular engineering terms. (See page 84).

In the following tabular summary of curriculums (pp. 75-84) each course is followed by two numbers: the first under the column marked "Cl," indicates the number of class hours of recitation, laboratory, drawing room, or field work a week; the second number, under the column marked "Out" indicates the number of hours of "outside preparation" that have been assigned as the minimum weekly requirement for each course. The work is so planned that the student will be required to spend from forty-eight to fifty-two hours per school week in preparation and class work.

The number preceding each course is a subject index number referring to the Synopses of Courses, beginning on page 86.

Those courses preceding by 0 indicate general subjects. The work which is under the direction of the General Departments is designated as follows: 01, Department of English; such as 02, Department of Mathematics; 03, Department of Physics; and 04, Department of Drawing, etc.

The subject numbers beginning with 1 indicate subjects pertaining strictly to the Department of Civil Engineering; subject numbers beginning with 2, to the Department of Mechanical Engineering; 3, to the Department of Electrical Engineering; 4, to the Department of Chemical Engineering; and 5, to Administrative Engineering.

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CIVIL ENGINEERING

The Civil Engineering Curriculum is designed to give the student a thorough foundation in those subjects which form the basis of a technical engineering education, and special training in those subjects comprised under the term "Civil Engineering." The student receives theoretical and practical training in the sciences upon which professional practice is based.

Civil engineering covers such a broad field that no one can become expert in its whole extent. It includes topographical engineering, municipal engineering, railroad engineering, structural engineering, and hydraulic and sanitary engineering. It covers land surveying, the building of railroads, harbors, docks, and similar structures; the construction of sewers, waterworks, roads and streets; the design and construction of girders, roofs, trusses, bridges, buildings, walls, foundations, and all fixed structures. All of these branches of engineering rest, however, upon the relatively compact body of principles, and in these principles the students are trained by practice in the class room, drawing room, the field, and the testing laboratory. The curriculum is designed to prepare the young engineer to take up the work of design and construction of structures, to aid in the location and construction of railways and highways and to undertake intelligently supervision of work in the allied fields of mining, architectural, and electrical engineering, and general contracting.

FIRST YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
010-1	English.....	3 6	010-1	English.....	3 6
020-1	College Algebra.....	4 6	022-1	Analytic Geometry.....	4 6
021-1	Trigonometry.....	3 6	031-1	Physics.....	4 8
041-1	Mechanical Drawing.....	5 0	041-2	Mechanical Drawing.....	4 0
060-1	Physical Training.....	2 0	060-1	Physical Training.....	2 0
11-1	Surveying.....	2 4	11-2	Surveying.....	2 4
11-3	Surveying, F. & P.....	5 0	11-4	Surveying, F. & P.....	5 0
SUMMER TERM					
012-1	History of Science.....	5 10			
043-1	Descriptive Geometry.....	20 10			

SECOND YEAR

FIRST SEMESTER		Hours per week Cl Out		SECOND SEMESTER		Hours per week Cl Out	
023-1	Differential Calculus.....	4	6	023-2	Integral Calculus.....	3	6
032-1	Light.....	3	3	033-1	Heat.....	3	4
034-2	Physics Laboratory.....	2	2	034-3	Physics Laboratory.....	2	2
11-5	Surveying.....	2	4	12-1	Railroad Surveying.....	3	4½
11-6	Surveying, F. & P.....	5	0	12-2	Rrd. Surveying, F. & P.....	5	0
21-1	Applied Mechanics.....	3	6	21-2	Applied Mechanics.....	3	6
30-1	Applied Electricity I.....	3	3	30-3	Applied Electricity II.....	3	3
30-4	Applied Electricity Lab...	3	0	30-4	Applied Electricity Lab...	3	0

THIRD YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
014-1	Economics	3 4	014-1	Economics	3 4
050-1	Engineering Conference	2 0	050-1	Engineering Conference	2 0
13-1	Hydraulics	3 6	14-1	Theory of Structures	3 6
14-5	Structural Drawing	3 0	14-6	Structural Drawing	3 0
16-4	Geology	2 4	16-2	Testing Materials Lab	2 2
21-3	Strength of Materials	3 6	21-3	Strength of Materials	3 6
12-3	Railroad Engineering	2 4	23-3	Heat Engineering	3 6
12-4	Rrd. Engineering, F. & P.	5 0	40-1	Inorganic Chemistry	3 4

FOURTH YEAR

FIRST SEMESTER			Hours per week Cl Out	SECOND SEMESTER			Hours per week Cl Out
050-1	Engineering Conference...	2	0	050-1	Engineering Conference...	2	0
052-1	Thesis.....	1	3	052-1	Thesis.....	1	6
14-3	Engineering Structures....	6	9	14-3	Engineering Structures....	6	9
14-7	Structural Design.....	6	3	14-8	Structural Design.....	6	3
16-1	Materials.....	2	4				
OPTION I							
15-1	Concrete.....	2	4	15-1	Concrete.....	2	4
15-2	Concrete Design.....	3	0	15-2	Concrete Design.....	3	0
16-3	Foundations.....	2	2	17-1	Highway Engineering....	2	4
OPTION 2							
54-2	Economic Geography.....	2	4	54-7	Foreign Trade.....	2	4
50-1	Industrial Organization...	3	6	50-2	Industrial Finance.....	3	6

NORTHEASTERN UNIVERSITY

MECHANICAL ENGINEERING

The Mechanical Engineering Curriculum is designed to give the student a broad foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the young engineer with a knowledge of the various phases of Mechanical Engineering. The curriculum embraces instruction by text-book, lecture, laboratory, drafting and designing room practice, with special reference to the following branches: applied mechanics, heat engineering, industrial engineering, hydraulic engineering, applied electricity, machine design and experimental engineering.

Along with the theoretical work, there runs a well planned laboratory course which is expected to develop the students' initiative and instil accuracy. The students perform the tests themselves on the machines such as engines, compressors, pumps, and other power plant equipment, and make reports on the results obtained.

The instruction aims to develop in the student the ability to think clearly and logically in the application of fundamental principles to engineering problems. The class-room work in the professional subjects is arranged with due regard to modern industrial conditions, in order that the student may connect theory with practice and appreciate the necessity of both in order to become a successful engineer. With this in view, special courses are given involving a discussion of problems which have presented themselves to the students and requiring a familiarity with the contents of current engineering periodicals. At all times it is sought to develop self-confidence in the student, and he is encouraged to take the initiative.

The Mechanical Engineering Department trains men capable of designing, erecting, testing, organizing and managing. The department aims to produce trained engineers, whose knowledge of fundamentals, technical theory, and engineering judgment qualify the young graduate to develop in the engineering field and ultimately hold positions of responsibility.

SCHOOL OF ENGINEERING

CURRICULUM II. MECHANICAL ENGINEERING

FIRST YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		C1 Out			C1 Out
010-1	English.....	3 6	010-1	English.....	3 6
020-1	College Algebra.....	4 6	022-1	Analytic Geometry.....	4 6
021-1	Trigonometry.....	3 6	031-1	Physics.....	4 8
041-1	Mechanical Drawing.....	5 0	041-3	Mechanical Drawing.....	8 1
060-1	Physical Training.....	2 0	060-1	Physical Training.....	2 0
24-1	Production Engineering..	4 6	40-1	Inorganic Chemistry....	4 4

SUMMER TERM

012-1	History of Science.....	5 10
043-1	Descriptive Geometry....	20 10

SECOND YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		C1 Out			C1 Out
023-1	Differential Calculus....	4 6	023-2	Integral Calculus.....	3 6
032-1	Light.....	3 3	033-1	Heat.....	3 4
034-2	Physics Laboratory.....	2 2	034-3	Physics Laboratory.....	2 2
042-3	Machine Drawing.....	6 0	044-3	Mechanism.....	6 6
044-2	Mechanism.....	2 4	21-2	Applied Mechanics.....	3 6
21-1	Applied Mechanics.....	3 6	30-3	Applied Electricity II....	3 3
30-1	Applied Electricity I....	3 3	30-4	Applied Electricity Lab..	3 0
30-4	Applied Electricity Lab..	3 0			

THIRD YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		C1 Out			C1 Out
014-1	Economics.....	3 4	014-1	Economics.....	3 4
050-1	Engineering Conference..	2 0	050-1	Engineering Conference..	2 0
21-3	Strength of Materials....	3 6	21-3	Strength of Materials....	3 6
22-1	Graphical Analysis.....	6 3	22-2	Machine Design.....	6 3
23-1	Heat Engineering.....	3 6	23-1	Heat Engineering.....	3 6
13-1	Hydraulics.....	3 6	26-1	Engineering Laboratory..	2 4
24-3	Power Plant Equipment..	2 4	22-5	Mechanisms of Machines.	3 3

FOURTH YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		C1 Out			C1 Out
050-1	Engineering Conference..	2 0	050-1	Engineering Conference..	2 0
052-1	Thesis.....	1 3	052-1	Thesis.....	1 6
16-1	Materials.....	2 4	24-4	Power Plant Engineering	3 6
22-3	Machine Design.....	6 3	24-6	Standard Eng. Products and Processes.....	2 4
25-1	Industrial Plants.....	4 6	25-1	Industrial Plants.....	6 3

OPTION 1

23-5	Heat Engineering.....	3 6	22-4	Machine Design.....	6 3
26-2	Engineering Laboratory ..	4 6	23-4	Steam Turbines.....	2 4
			26-3	Engineering Laboratory..	2 2

OPTION 2

54-2	Economic Geography.....	2 4	54-7	Foreign Trade.....	2 4
50-1	Industrial Organization...	3 6	50-2	Industrial Finance.....	3 6

NORTHEASTERN UNIVERSITY

ELECTRICAL ENGINEERING

Probably none of the branches of scientific knowledge has been so markedly modified during the past decade as that relating to Electrical Engineering, nor has any other exerted such a profound influence upon the scientific thought of the period. A science, like a planet, grows in the main by a process of infinitesimal accretion. Its theory is built like a cathedral through additions by many builders of many different elements, and this is pre-eminently true of electricity. It is absolutely essential that the electrical engineer who hopes to make a success of his work should be able to grasp readily and absorb effectively the meaning and content of the many scientific memoirs recording the results of research bearing upon and directly influencing his chosen branch of engineering.

He must have a thorough appreciation of physical theory, a clear understanding of chemical principles, and a broad working knowledge of mathematics. It is essential that each student planning to take this curriculum should realize the fundamental necessity of obtaining a solid grounding in these three subjects upon which the success of his future work will definitely hinge, nor can he be too strongly urged to include physics in his high school preparatory course if he hopes to avoid difficulty in the earlier years.

It is not the purpose of the curriculum to attempt the impossible in aiming to turn out electrical engineers, fully trained in all branches of the science, especially as it is becoming daily more differentiated and specialized. The curriculum is designed rather to lay a broad and secure foundation for future progress along the lines of activity which may particularly appeal to each individual student and give him a good working knowledge of the essential principles which underlie each of the more specialized branches of professional work.

Parallel with the theoretical work runs a carefully planned course of laboratory instruction which is intended to develop the student's power of accurate observation, of planning work and methods of procedure for himself with due regard to saving of time and labor and precision of the results attained.

SCHOOL OF ENGINEERING

CURRICULUM III. ELECTRICAL ENGINEERING

FIRST YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
010-1	English.....	3 6	010-1	English.....	3 6
020-1	College Algebra.....	4 6	022-1	Analytic Geometry.....	4 6
021-1	Trigonometry.....	3 6	031-1	Physics.....	4 8
041-1	Mechanical Drawing.....	5 0	041-3	Mechanical Drawing.....	8 1
060-1	Physical Training.....	2 0	060-1	Physical Training.....	2 0
32-1	Elect. Eng. I.....	2 3	32-1	Elect. Eng. I.....	3 3
40-1	Inorganic Chemistry.....	4 4			

SUMMER TERM

012-1	History of Science.....	5 10
043-1	Descriptive Geometry.....	20 10

SECOND YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
023-1	Differential Calculus.....	4 6	023-2	Integral Calculus.....	3 6
032-1	Light.....	3 3	033-1	Heat.....	3 4
034-2	Physics Laboratory.....	2 2	034-3	Physics Laboratory.....	2 2
042-5	Engineering Drawing.....	3 0	042-5	Engineering Drawing.....	3 0
21-1	Applied Mechanics.....	3 6	21-2	Applied Mechanics.....	3 6
32-3	Elect. Eng. II.....	4 6	32-3	Elect. Eng. II.....	4 6
32-4	Elect. Eng. II Lab.....	5 3	32-4	Elect. Eng. II Lab.....	5 3

THIRD YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
014-1	Economics.....	3 4	014-1	Economics.....	3 4
050-1	Engineering Conference.....	2 0	050-1	Engineering Conference.....	2 0
21-4	Strength of Materials.....	3 6	13-3	Hydraulics.....	2 4
32-6	Elect. Eng. III Lab.....	6 3	32-6	Elect. Eng. III Lab.....	6 3
23-7	Heat Engineering.....	3 6	23-7	Heat Engineering.....	3 6
32-7	Elect. Eng. III.....	3 6	32-7	Elect. Eng. III.....	3 4
33-1	Elect. Measurements.....	2 4	33-1	Elect. Measurements.....	2 3
			33-2	Elect. Measurements Lab.....	3 3

FOURTH YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
050-1	Engineering Conference.....	2 0	050-1	Engineering Conference.....	2 0
052-1	Thesis.....	1 3	052-1	Thesis.....	1 6
26-6	Engineering Laboratory.....	2 2	24-6	Standard Eng. Products and Processes.....	2 4
32-8	Elect. Eng. IV Lab.....	6 3	32-8	Elect. Eng. IV Lab.....	6 3
32-9	Elect. Eng. IV.....	5 8	32-9	Elect. Eng. IV.....	5 8
33-4	Advanced Standard Lab.....	3 3	34-1	Elect. Eng. V.....	4 4
34-1	Elect. Eng. V.....	4 4	35-1	Advanced Electricity.....	2 2
35-1	Advanced Electricity.....	2 3			

NORTHEASTERN UNIVERSITY

CHEMICAL ENGINEERING

"The Chemical Engineer is a professional man experienced in the design, construction and operation of plants, in which materials undergo chemical and physical change."

It is only within the last decade that the chemical industrial enterprises have realized that the design, construction and operation of the chemical plants should be placed in the hands of men who are familiar with the chemical phases of the plant.

The purpose of this curriculum is to train students so that they might be prepared to fill the demand for men competent to build and operate manufacturing industries, based upon chemical principles at their maximum efficiency. The professional work of the curriculum falls naturally into three groups: First, courses which provide a knowledge of the fundamental principles of chemistry. Second, those courses which furnish a knowledge of mechanical and electrical engineering. Third, engineering practice in which the student becomes familiar with the many applications of theoretical principles.

The laboratory work has been planned not only to familiarize the student with many types of chemical compounds and apparatus, but also to train the student to be an exact and logical thinker, and to encourage a desire for the application of his knowledge and training to the investigation and solution of the many problems which modern industry presents.

SCHOOL OF ENGINEERING

CURRICULUM IV. CHEMICAL ENGINEERING

FIRST YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
010-1	English.....	3 6	010-1	English.....	3 6
020-1	College Algebra.....	4 6	022-1	Analytic Geometry.....	4 6
021-1	Trigonometry.....	3 6	031-1	Physics.....	4 8
041-1	Mechanical Drawing.....	5 0	041-2	Mechanical Drawing.....	4 0
060-1	Physical Training.....	2 0	060-1	Physical Training.....	2 0
41-1	Inorganic Chemistry.....	4 4	41-1	Inorganic Chemistry.....	4 4
41-2	Inorganic Chemistry Lab..	5 0	41-2	Inorganic Chemistry Lab..	5 0

SUMMER TERM

42-1	Qualitative Analysis.....	10 20
42-2	Qualitative Analysis Lab..	28 0

SECOND YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
023-1	Differential Calculus.....	4 6	011-1	German.....	2 4
032-1	Light.....	3 3	023-2	Integral Calculus.....	3 6
034-2	Physics Laboratory.....	2 2	033-1	Heat.....	3 4
042-6	Engineering Drawing.....	3 0	034-3	Physics Laboratory.....	2 2
21-1	Applied Mechanics.....	3 6	042-6	Engineering Drawing.....	3 0
30-1	Applied Electricity I.....	3 3	21-2	Applied Mechanics.....	3 6
43-1	Quantitative Analysis.....	2 4	30-3	Applied Electricity II...	3 3
43-2	Quantitative Anal. Lab..	5 0	43-2	Quantitative Anal. Lab..	5 0

THIRD YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
011-2	German.....	2 2	014-1	Economics.....	3 4
014-1	Economics.....	3 4	050-1	Engineering Conference..	2 0
050-1	Engineering Conference...	2 0	13-3	Hydraulics.....	2 4
21-4	Strength of Materials....	3 6	23-3	Heat Engineering.....	3 6
44-1	Technical Analysis.....	3 6	44-3	Technical Analysis.....	2 4
44-2	Technical Analysis Lab...	5 0	45-1	Organic Chemistry.....	3 6
45-1	Organic Chemistry.....	3 6	45-2	Organic Chemistry Lab...	5 0
45-2	Organic Chemistry Lab...	5 0	46-2	Chemical Engineering....	2 4

FOURTH YEAR

FIRST SEMESTER		Hours per week	SECOND SEMESTER		Hours per week
		Cl Out			Cl Out
050-1	Engineering Conference...	2 0	050-1	Engineering Conference..	2 0
052-1	Thesis.....	1 3	052-1	Thesis.....	1 6
45-3	Organic Chemistry.....	2 6	45-3	Organic Chemistry.....	2 6
45-4	Organic Chemistry Lab...	5 0	45-4	Organic Chemistry Lab...	5 0
46-3	Chemical Engineering....	3 6	46-3	Chemical Engineering....	3 6
47-1	Industrial Chemistry.....	3 3	47-1	Industrial Chemistry.....	2 2
47-2	Industrial Chemistry Lab.	3 0	47-2	Industrial Chemistry Lab.	3 0
48-1	Physical Chemistry.....	4 8	48-1	Physical Chemistry.....	4 8

NORTHEASTERN UNIVERSITY

ADMINISTRATIVE ENGINEERING

Engineering and industry have developed simultaneously, thus the engineer who understands the underlying principles of business is in great demand. Moreover, the successful engineering firm must have business experts on its staff. Engineering severed from the industrial and economic world is an utter impossibility. This dual development of engineering and business has given rise to a distinct branch of engineering which requires men who understand the technique of engineering and at the same time have the vision and liberality of progressive business men.

Many men fill high executive positions and administrative offices without having had technical training, but they have acquired by experience and by private study the scientific knowledge required in their positions. Training in both business and engineering is a double asset to a young man. Some young engineers have neither the aptitude nor the special ability for a strictly scientific career; and some are ambitious to take up administrative work. The number of high technical positions, though large in the aggregate, is relatively small in comparison with the number of graduates. The majority of them must face the alternative either of filling routine positions or qualifying themselves definitely for administrative positions. Engineering students fitted to make the most of their opportunities should not only be trained as scientists, but should also have first-hand knowledge of the problems of production, exchange, finance, government, labor and business principles.

The object of this curriculum is to prepare for executive and managerial positions for which a knowledge of engineering principles and methods is pre-requisite. Administrative engineering is not intended for those who expect to become professional engineers in the field of design and construction, nor for those who expect to fill executive positions in which a knowledge of engineering equivalent to that ordinarily gained in any one of the other engineering courses is pre-requisite.

SCHOOL OF ENGINEERING

CURRICULUM V. ADMINISTRATIVE ENGINEERING

FIRST YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
010-1	English.....	3 6	010-1	English.....	3 6
020-1	College Algebra.....	4 6	022-1	Analytic Geometry.....	4 6
021-1	Trigonometry.....	3 6	031-1	Physics.....	4 8
041-1	Mechanical Drawing.....	5 0	041-2	Mechanical Drawing.....	4 0
060-1	Physical Training.....	2 0	060-1	Physical Training.....	2 0
014-9	Social Origin.....	3 6	40-1	Inorganic Chemistry.....	4 4
012-4	United States History.....	2 4	013-2	American Government...	2 4

SUMMER TERM

012-1	History of Science.....	5 10
11-7	Surveying.....	20 10

SECOND YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
023-1	Differential Calculus.....	4 6	023-2	Integral Calculus.....	4 6
032-1	Light.....	3 3	033-1	Heat.....	3 4
034-2	Physics Laboratory.....	2 2	034-1	Physics Laboratory.....	2 2
042-6	Engineering Drawing.....	3 0	042-6	Engineering Drawing.....	3 0
21-1	Applied Mechanics.....	3 6	21-2	Applied Mechanics.....	3 6
30-1	Applied Electricity I.....	3 3	30-3	Applied Electricity II.....	3 3
014-1	Economics.....	3 4	014-1a	Economics.....	3 4
54-2	Economic Geography.....	2 4	54-7	Foreign Trade.....	2 4

THIRD YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
050-1	Engineering Conference...	2 0	050-2	Engineering Conference...	2 0
21-4	Strength of Materials....	3 6	16-2	Testing Materials Lab....	2 2
13-1	Hydraulics.....	3 6	23-3	Heat Engineering.....	3 6
24-3	Power Plant Equipment...	2 4	52-2	Money and Banking.....	3 6
50-1	Industrial Organization...	2 4	50-2	Industrial Finance.....	2 4
51-3	Elements of Accounting...	4 6	54-8	Transportation.....	3 6
54-3	Marketing.....	3 6	54-9	Salesmanship.....	3 6

FOURTH YEAR

FIRST SEMESTER		Hours per week Cl Out	SECOND SEMESTER		Hours per week Cl Out
050-3	Engineering Conference...	2 0	050-4	Engineering Conference...	2 0
052-1	Thesis.....	1 3	052-1	Thesis.....	1 6
16-1	Materials.....	2 4	24-6	Standard Engineering Products and Processes...	2 4
50-6	Business Administration...	3 6	50-6	Business Administration...	3 6
014-6	Labor Problems.....	3 6	51-6	Industrial Problems.....	2 4
53-3	Business Law.....	3 6	53-3	Business Law.....	3 6
014-4	Psychology.....	3 6	51-7	Personnel Administration	3 6

NORTHEASTERN UNIVERSITY

*CURRICULUM FOR THE FULL-TIME PLAN

FIRST TERM

**SOPHOMORE YEAR		Hours		JUNIOR YEAR		Hours	
		per week				per week	
		Cl	Out			Cl	Out
010-2	Literature I.....	3	6	010-5	Public Speaking I.....	3	6
012-2	History I.....	3	6	014-2	Sociology I.....	3	6
013-1	Government I.....	3	6	014-5	Ethics I.....	3	6
014-4	Psychology I.....	3	6	014-8	Modern Social Prob. I....	3	6
50-11	Business Principles I....	3	6	50-8	Business Admin. I.....	3	6
52-2	Money and Bank I.....	3	6	53-2	Business Law I.....	3	6

SECOND TERM

**SOPHOMORE YEAR		Hours		JUNIOR YEAR		Hours	
		per week				per week	
		Cl	Out			Cl	Out
010-3	Literature II.....	3	6	010-6	Public Speaking II.....	3	6
012-3	History II.....	3	6	014-3	Sociology II.....	3	6
013-1a	Government II.....	3	6	014-5a	Ethics II.....	3	6
014-4a	Psychology II.....	3	6	014-8a	Mod. Social Prob. II....	3	6
50-11a	Business Prin. II.....	3	6	50-9	Business Admin. II.....	3	6
52-2a	Money and Bank. II.....	3	6	53-2a	Business Law II.....	3	6

THIRD TERM

**SOPHOMORE YEAR		Hours		JUNIOR YEAR		Hours	
		per week				per week	
		Cl	Out			Cl	Out
010-4	Literature III.....	3	6	010-7	Public Speaking III.....	3	6
012-3a	History III.....	3	6	014-3a	Sociology III.....	3	6
013-1b	Government III.....	3	6	014-5b	Ethics III.....	3	6
014-4b	Psychology III.....	3	6	014-8b	Mod. Social Probs. III....	3	6
50-11b	Business Prin. III.....	3	6	50-9a	Business Admin. III.....	3	6
52-2b	Money and Bank III.....	3	6	53-2b	Business Law III.....	3	6

*Full-time courses alternate, sophomore courses given one year, junior courses the next.

**These courses are not given in 1925-1926. Sophomores and juniors will both take junior courses.

SCHOOL OF ENGINEERING

SUBJECTS OF INSTRUCTION

Instruction is given through lectures and recitations, by practical exercises in the field, in the laboratories, and in the drawing rooms. These exercises are of great educational value, therefore form the foundation of each of the five curriculums. In many branches the instruction given differs widely from available texts in which cases notes on the lectures and laboratory work are usually issued to the students. Besides oral examinations in connection with the ordinary exercises, written examinations are held from time to time.

In the following pages will be found a more or less detailed statement of the scope of the subjects offered in the various curriculums. The subjects are classified, as far as possible, related studies being arranged in sequence. The subjects are numbered for convenience in consulting the various curriculums. A complete table of the Subjects of Instruction will be found at the end of the catalog. Under each subject is given a list of the courses required as prerequisite for that subject. These requirements are vital to a clear comprehension of the advanced work. In some cases, the required preparation may be taken simultaneously but must be completed before further advanced work is undertaken.

Students electing a subject must complete that subject in order to be considered as a candidate for a degree.

By careful consideration of the curriculums, in connection with the following Synopses of Courses, the applicant for a special curriculum may select, for the earlier part of that curriculum, such subjects as will enable him to pursue later those more advanced subjects which he may particularly desire. Applications for exception from the required preparation as stated in connection with each subject described below, will be passed on by the Faculty.

The topics included in the list which follows are subject to change at any time by action of the School authorities.

NORTHEASTERN UNIVERSITY

SYNOPSIS OF COURSES

In the following synopses under each course, "Curriculums" refers to the five principal curriculums of Civil I, Mechanical II, Electrical III, Chemical IV and Administrative V. "*Full-time*" following the word curriculum indicates that the course is open only to students admitted to the full-time plan. The courses themselves are arranged in groups according to the departments in which the course is given.

The "year" refers to the time when the subject is ordinarily taken under the regular schedule, "both semesters" referring to both the First and Second Semesters, and "Summer Term" referring to the four-week term starting in June or in August.

"Preparation" gives the courses by number which the student must have taken previously to the advanced courses, unless stated exceptions are made in which case both courses may be carried simultaneously. Under the number of "hours per week," "Cl" refers to the hours of class room or laboratory work and "Out" to the hours of outside preparation. The main body of the synopsis shows in a brief form the ground covered by the course. At the end of the synopsis is given the names of the instructors for that particular subject; the first named being in charge.

SCHOOL OF ENGINEERING

*GENERAL DEPARTMENTS

010-1 ENGLISH

All curriculums

First year, both semesters

Preparation: —

Three hours per week

English Composition is especially adapted to the needs of men who expect to follow the engineering profession. The work consists of lectures, recitations, class discussions, weekly themes, tests, reports, and a limited amount of outside reading, particularly in modern scientific journals. The material for the themes is largely drawn from, or related to, the student's study.

PROFESSOR MELVIN, MESSRS. ESTES AND HOUTCHENS.

**010-2 LITERATURE I

Curriculum: Full-time

Second year, first term

Preparation: 010-1

Three hours per week

This course will deal with history and principles of the classic and modern short story. Lectures, supplemented by wide reading in the great short story writers, both past and present, will form the basis of the course. The aim will be to develop a real appreciation for this form of literature.

PROFESSOR MELVIN.

**010-3 LITERATURE II

Curriculum: Full-time

Second year, second term

Preparation: 010-1

Three hours per week

The study of famous essays will be the purpose of this course. Special attention will be given to those dealing with university life, although wide reading in all types of the essay will be required of the students.

PROFESSOR MELVIN.

**010-4 LITERATURE III

Curriculum: Full-time

Second year, third term

Preparation: 010-1

Three hours per week

A brief review of the history of the drama will be followed by a discussion of dramatic principles. Reading and discussion of great English and American dramas will be required.

PROFESSOR MELVIN.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

**Not given 1925-1926.

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010-5 PUBLIC SPEAKING I

Curriculum: Full-time
Third year, first term

Preparation: 010-1
Three hours per week

This course will offer practical training in the preparation and presentation of the various types of speeches. The instruction will be planned to eliminate defects of voice, posture, etc., and to develop in the student an ability to speak easily, naturally and forcefully.

PROFESSOR MELVIN.

010-6 PUBLIC SPEAKING II

Curriculum: Full-time
Third year, second term

Preparation: 010-1
Three hours per week

A continuation of 010-5 Public Speaking I.

PROFESSOR MELVIN.

010-7 PUBLIC SPEAKING III

Curriculum: Full-time
Third year, third term

Preparation: 010-1
Three hours per week

A continuation of 010 Public Speaking II.

PROFESSOR MELVIN.

011-1 GERMAN

Curriculum: IV
Second year, second semester

Preparation: —
Two hours per week

All students in the Chemical Engineering Curriculum are required to show before graduation a sufficient knowledge of the German language to be able to read technical books and scientific articles written in the German language. For students who have not obtained this knowledge before entering college, this course will offer a study of grammatical forms, syntax, and vocabulary through composition exercises and rapid reading. The entire purpose is to give the student a knowledge of German grammar with a working vocabulary of scientific terms.

DR. STRAUSS.

011-2 GERMAN

Curriculum: IV
Third year, first semester

Preparation: 011-1
Two hours per week

A continuation of German 011-1.

DR. STRAUSS.

SCHOOL OF ENGINEERING

012-1 HISTORY OF SCIENCE

Curriculums: I, II, III, V
First year, summer term

Preparation: —
Five hours per week

The aim is to give broad view of the growth of science, extend the range of the student's interests, and encourage discriminating scientific reading.

PROFESSOR MELVIN.

**012-2 MODERN HISTORY I

Curriculum: Full-time
Second year, first term

Preparation: —
Three hours per week

The course is a brief survey of European and American movements, political, social, and industrial since 1800. The aim of the course is to provide a background for the understanding of current historical movements.

PROFESSOR SCHLAGENHAUF.

**012-3 MODERN HISTORY II

Curriculum: Full-time
Second year, second term

Preparation: —
Three hours per week

Continuation of 012-2 Modern History I.—(See above.)

**102-3a MODERN HISTORY III

Curriculum: Full-time
Second year, third term

Preparation: —
Three hours per week

This course is a continuation of Modern History II. (See above.)

012-4 UNITED STATES HISTORY

Curriculum: V
First year, first semester

Preparation: —
Two hours per week

The object of this course is to give the student a concise survey of the American political, social and economic development.

MR. ESTES.

**013-1 GOVERNMENT I

Curriculum: Full-time
Second year, first term

Preparation: —
Three hours per week

This course consists of the theory and practice of government in the existing forms of national organization in the United States and Great Britain. The relations between the

**Not given 1925-1926.

NORTHEASTERN UNIVERSITY

executive, the legislature, and the judiciary will form the basis of investigation. In the lectures additional illustrative material will be taken from France, Switzerland, and Canada. It is hoped that the men will look on the study of government, not as academic but as practical, through constant reference to contemporary men and affairs.

PROFESSOR MELVIN.

****013-1a GOVERNMENT II**

Curriculum: Full-time
Second year, second term

Preparation: —
Three hours per week

Continuation of Government I. (See above.)

****013-1b GOVERNMENT III**

Curriculum: Full-time
Second year, third term

Preparation: —
Three hours per week

Continuation of Government II. (See above.)

013-2 AMERICAN GOVERNMENT

Curriculum: V
First year, second semester

Preparation: —
Two hours per week

In this course a brief survey of the Federal, State and Municipal governments is made, showing their relation to industrial enterprise and development.

MR. ESTES.

014-1 PRINCIPLES OF ECONOMICS I

Curriculums: All
**Third year, first semester*

Preparation: —
Three hours per week

This course consists of a rapid survey of the elementary principles of economics, such as those of wealth, labor, capital, value, price, and so forth. Particular attention is paid to the consideration of money, the mechanism of exchange, banking and its relation to the finances of corporations. In studying the distribution of wealth, considerable attention is paid to the questions of wages and value, and their relation to business profits.

PROFESSOR SCHLAGENHAUF.

014-1a PRINCIPLES OF ECONOMICS II

Curriculums: All
**Third year, second semester*

Preparation: 014-1
Three hours per week

Continuation of Economics I. (See above.)

**Sophomore year for Curriculum V.*
***Not given 1925-1926.*

SCHOOL OF ENGINEERING

014-2 SOCIOLOGY I

Curriculum: Full-time
Third year, first term

Preparation: —
Three hours per week

This course is desired to give a rapid survey of the content of social laws, social evolution, and social progress. Physical, psychical, economic, and political factors in social progress. Lectures and assigned outside readings.

PROFESSOR SCHLAGENHAUF.

014-3 SOCIOLOGY II

Curriculum: Full-time
Third year, second term

Preparation: —
Three hours per week

The course will deal with social institutions, charities, public health, immigration, labor problems, etc.

014-3a SOCIOLOGY III

Curriculum: Full-time
Third year, third term

Preparation: —
Three hours per week

Continuation of Sociology II. (See above.)

014-9 SOCIAL ORIGIN

Curriculum: V
First year, first semester

Preparation: —
Three hours per week

This course considers the nature and development of the ways by which men have succeeded in living together in families, tribes and nations. The evolution from simple, customary actions of such complicated institutions as industrial organization, property, marriage, and government is traced.

PROFESSOR SCHLAGENHAUF.

**014-4 PSYCHOLOGY I

Curriculum: Full-time
Second year, first term

Preparation: —
Three hours per week

This course is intended to give a brief systematic survey of the principles of psychology and their application. A brief description of the nervous system, followed by an account of the various sensations, and the role they play in human behavior, will constitute the material for study.

MR. ESTES.

**Not given 1925-1926.

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****014-4a PSYCHOLOGY II**

Curriculum: Full-time
Second year, second term

Preparation: —
Three hours per week

Continuation of Psychology I (See above.)

****014-4b PSYCHOLOGY III**

Curriculum: Full-time
Second year, third term

Preparation: —
Three hours per week

Continuation of Psychology II. (See above.)

014-5 OUTLINES OF ETHICS I

Curriculum: Full-time
Third year, third term

Preparation: —
Three hours per week

This course aims to study the moral consciousness of man, with special reference to man's instincts, duty, freedom, sociability.

PROFESSOR SCHLAGENHAUF.

014-5a OUTLINES OF ETHICS II

Curriculum: Full-time
Third year, second term

Preparation: —
Three hours per week

Continuation of Ethics I. (See above.)

014-5b OUTLINES OF ETHICS III

Curriculum: Full-time
Third year, third term

Preparation: —
Three hours per week

Continuation of Ethics II. (See above.)

014-6 LABOR PROBLEMS

Curriculum: V
Fourth year, first semester

Preparation: —
Three hours per week

A brief survey of the economic and social relation of employer and employed will be made. Topics to be considered are such as history of unionism, policies of labor unions, types of unions, collective bargaining, and so forth.

PROFESSOR SCHLAGENHAUF.

**Not given 1925-1926.

SCHOOL OF ENGINEERING

014-8 MODERN SOCIAL PROBLEMS I

Curriculum: Full-time
Third year, first term

Preparation: ———
Three hours per week

This course introduces the student to some of the social problems of modern day. Such problems as labor, industrial reform, immigration, taxation, public health and so forth are considered. In addition to reading the text assigned, the student will be expected to complete assignments in daily newspapers and current periodicals.

PROFESSOR SCHLAGENHAUF.

014-8a MODERN SOCIAL PROBLEMS II

Curriculum: Full-time
Third year, second term

Preparation: ———
Three hours per week

Continuation of Modern Social Problems I. (See above.)

014-8b MODERN SOCIAL PROBLEMS III

Curriculum: Full-time
Third year, third term

Preparation: ———
Three hours per week

Continuation of Modern Social Problems II. (See above.)

NORTHEASTERN UNIVERSITY

*MATHEMATICS

020-1 COLLEGE ALGEBRA

Curriculum: All
First year, first semester

Preparation: —
Four hours per week

The study of algebra is scheduled to begin with the solution of the quadratic equation. However, a rapid although thorough review of the simpler operations of algebra precedes this. This solution of the quadratic and simultaneous quadratics is followed by a study of the theory of exponents, series, determinants, and principles of the theory of equations. Time permitting, the course includes graphs, permutations and combinations, and principles of vector analysis.

PROFESSORS SPEAR AND COOLIDGE.
MESSRS. BOND, PARSONS AND WHITTAKER.

021-1 TRIGONOMETRY

Curriculum: All
First year, first semester

**Preparation: 020-1*
Three hours per week

This course consists of the study of trigonometric function as ratios; transformation and solution of trigonometric equations; inverse functions; circular function; goniometry; logarithms; solution of exponential equations; solution of right and oblique triangles; law of sines, cosines, and tangents; areas. Considerable practice in calculations of practical problems enables the student to apply his trigonometry to problems arising in engineering practice at an early stage. Explanation of laws of spherical trigonometry is also taken up.

PROFESSORS SPEAR AND COOLIDGE.
MESSRS. BOND, PARSONS, ALCOTT AND WHITTAKER.

022-1 ANALYTIC GEOMETRY

Curriculum: All
First year, second semester

Preparation: 021-1
Four hours per week

The course consists of the study of cartesian and polar coordinates; the equations of straight lines and simpler curves derived from the geometric properties of the curves; properties of curves derived from their equations; thorough study of

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

straight line, circle, and conic sections; intersection of curves, transformation of axes; plotting of polynomials, including exponential, trigonometric, and logarithmic functions; loci problems. An endeavor is made to develop the analytic sense in the student throughout the course, rather than to rely on the use of formulae.

PROFESSORS SPEAR AND COOLIDGE.
MR. PARSONS.

023-1 DIFFERENTIAL CALCULUS

*Curriculums: All
Second year, first semester*

*Pre-requisite 020-1; 022-1
Four hours per week*

In this course are taken up the theory of limits; rates of change; differentiation of algebraic, trigonometric, exponential, and logarithmic functions; slopes of curves; maxima and minima, with practical problems; partial differentiation; derivatives of higher order; length of curves; radius of curvature etc.; expansion of functions, series.

Although the subject matter deals with considerable theory, constant sight is kept of the practical application of all the theory. The geometric interpretation of every new subject is carefully defined, and problems are continually solved dealing in practical applications of theory. Velocity and acceleration problems in mechanics are typical of those used for application of differentiation.

PROFESSOR SPEAR AND MR. ALCOTT.

023-2 INTEGRAL CALCULUS

*Curriculums: All
Second year, second semester*

*Preparation: 023-1
Three hours per week*

This course is a continuation of Calculus 023-1, and deals with integration as the inverse of differentiation; integration as a summation; definite integrals; use of tables; double and triple integrals; areas in rectangular and polar co-ordinates; volumes; center of gravity; moment of inertia; practical problems depending on the differential and integral calculus for solution; solution of simpler differential equations.

PROFESSOR SPEAR AND MR. ALCOTT.

NORTHEASTERN UNIVERSITY

*PHYSICS

All students in the first year are required to take an examination in elementary physics. Men failing to receive a satisfactory grade are required to add courses 030-1 Physics and 034-1 Physics Laboratory to their program of studies.

030-1 PHYSICS

First year, first semester

Preparation: —
Two hours per week

This is a course in the fundamental principles of elementary physics to be taken by students who have not had sufficient preparation for the subsequent courses in physics. The course includes the principles of mechanics, heat, light, and sound, with problems, lectures, and experiments.

MR. HATCH.

031-1 PHYSICS

First year, second semester

Preparation: 020-1, 030-1, 021-1
Four hours per week

The course is a study in the fundamental principles of elementary physics. The subjects studied are: equilibrium of bodies acted upon by parallel forces, equilibrium of bodies acted upon by concurrent forces, vectors, relative velocities, uniform velocity, uniformly accelerated motion, simple harmonic motion, motion on an inclined plane, energy, work, horse-power, angular velocity and acceleration, moment of inertia, centrifugal force, fluid pressure, density and specific gravity of solids and liquids, Boyles law, and hydrometers. It is the purpose of the course to lay a thorough foundation for subsequent study of experimental and technical physics. Hence it is planned to familiarize the pupil with the fundamental principles of the science.

PROFESSOR COOLIDGE AND MR. HATCH.

032-1 LIGHT

Curriculum: All
Second year, first semester

Preparation: 020-1, 030-1, 021-1
Three hours per week

The course consists of the study of light, including wave motion, mirrors, refraction, lenses, optical instruments, dispersion, interference, diffraction, and polarization of light.

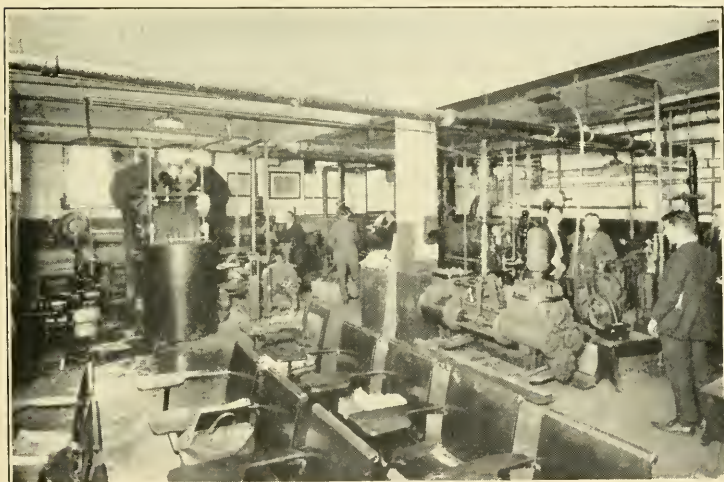
PROFESSOR COOLIDGE AND MR. WHITTAKER.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

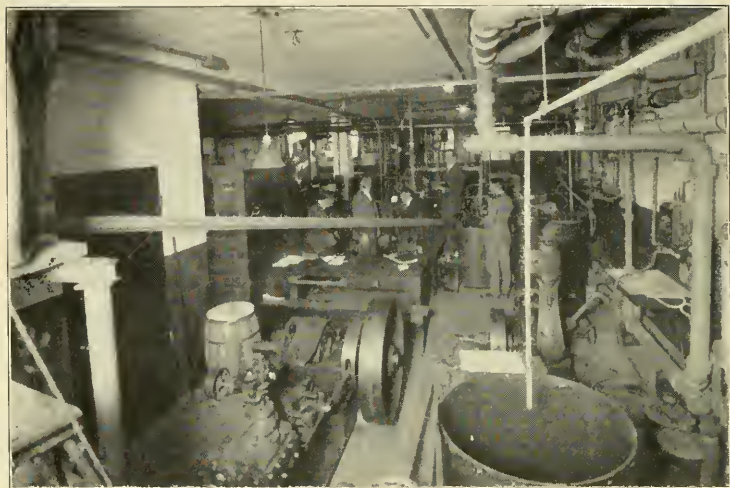


FRESHMEN CLASS IN MECHANICAL DRAWING



EXPERIMENTAL TESTS IN MECHANICAL LABORATORY

NORTHEASTERN UNIVERSITY



SECTION OF MECHANICAL LABORATORY



CONSTRUCTION AND ASSEMBLY, WORTHINGTON PUMP & MACHINERY
CORPORATION, BLAKE & KNOWLES WORKS

SCHOOL OF ENGINEERING

033-1 HEAT

*Curriculums: All
Second year, second semester*

*Preparation: 030-1
Three hours per week*

The topics studied are: thermometry, expansion of solids, liquids, and gases, calorimetry, change of state including latent heat of fusion and vaporization (sublimation), triple point diagram, conduction and radiation, and the mechanical equivalent of heat.

PROFESSOR COOLIDGE AND MR. WHITTAKER.

034-1 PHYSICS LABORATORY

First year, second semester

*Preparation: 030-1
Two hours per week*

The course consists of a series of experiments of an elementary grade to supplement the course 030-1 for students who are found to be deficient in the fundamentals of physics.

PROFESSOR COOLIDGE.
MR. HATCH AND ASSISTANTS.

034-2 PHYSICS LABORATORY

*Curriculums: All
Second year, first semester*

*Preparation: 034-1, 031-1, 021-1,
032-1, 033-1
Two hours per week*

This course consists of experiments on mechanics performed by each student, supplementing the lecture and class room work in Physics 031-1. The experiments include the use of verniers, micrometers, and spherometers, calculation of true weights, determination of specific gravities of solids by various methods, areas by planimeter, modulus of elasticity, and the determination of the value of "G."

PROFESSOR COOLIDGE AND MR. HATCH.

034-3 PHYSICS LABORATORY

*Curriculums: All
Second year, second semester*

*Preparation: *032-1, *033-1,
031-1, 021-1
Two hours per week*

This course is a series of experiments on light and heat to supplement the work done in Physics 032-1 and 033-1. The experiments on light include the determination of the index of refraction of a lens, the position of images in combinations of lenses, and the uses of the spectroscope. The experiments on

NORTHEASTERN UNIVERSITY

heat include the calibration of a thermometer, determination of the temperature of a mixture, the relations between the pressure and boiling point of water, and the use of the air thermometer.

PROFESSOR COOLIDGE.

PROFESSOR STEARNS AND ASSISTANTS.

*DRAWING

041-1 MECHANICAL DRAWING

*Curriculums: All
First year, first semester*

*Preparation: ———
Five hours per week*

This is an elementary course embracing straight line and compass exercises, geometrical constructions, lettering, orthographic projection and development.

PROFESSORS ASHLEY AND GEE.

MESSRS. TOZER, COPLEY, HATCH AND ANDERSON.

041-2 MECHANICAL DRAWING

*Curriculums: I, IV, V
First year, second semester*

*Preparation: 041-1
Four hours per week*

This course is a continuation of Mechanical Drawing 041-1, comprising problems in intersections, isometric drawing, perspective, and freehand drawing.

PROFESSORS ASHLEY AND GEE.

MESSRS. TOZER, COPLEY, HATCH AND ANDERSON.

041-3 MECHANICAL DRAWING

*Curriculums: II, III
First year, second semester*

*Preparation: 041-1
Eight hours per week*

This course is a continuation of Mechanical Drawing 041-1 comprising problems in perspective, isometric drawing, tracing and elementary machine drawing.

PROFESSORS ASHLEY AND GEE.

MESSRS. TOZER, COPLEY, HATCH AND ANDERSON.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

042-3 MACHINE DRAWING

Curriculum: II
Second year, first semester

Preparation: 041-3
Six hours per week

The course consists of reading and translating drawings. Detailed and assembly drawings of machine parts and simple machines are made from freehand sketches and other data, but nothing in the nature of a copy is permitted. The course is designed to give a thorough foundation for the study of machine design.

MR. TOZER.

042-5 ENGINEERING DRAWING

Curriculum: III
Second year, both semesters

Preparation: 041-3
Three hours per week

This course comprises problems in elementary machine drawing, freehand machine sketching and problems and class room discussions on simple mechanism of machines.

PROFESSORS ASHLEY AND GEE.

042-6 ENGINEERING DRAWING

Curriculum: IV, V
Second year, both semesters

Preparation: 041-2
Three hours per week

This course consists of problems in developments and intersections of solids, isometric drawing, and other pictorial representations.

PROFESSOR GEE.

043-1 DESCRIPTIVE GEOMETRY

Curriculums: I, II, III
First year, summer terms

Preparation: 041-1
Twenty hours per week

The course includes a study of the principles of descriptive geometry and their application to engineering by the solution of many problems in which theory and practice are closely correlated. Class room exercises are devoted to drafting board problems, preparation for which is obtained by the outside study of text-book references and practical problems.

PROFESSORS ASHLEY AND GEE.

MESSRS. TOZER AND ALCOTT.

044-2 MECHANISM

Curriculum: II
Second year, first semester

Preparation: 041-3
Two hours per week

This is an introductory course conducted mainly by graphical methods and dealing with gear trains, and velocity ratios.

PROFESSOR ASHLEY.

NORTHEASTERN UNIVERSITY

044-3 MECHANISM

Curriculum: II
Second year, second semester

Preparation: 044-2
Six hours per week

This course is a continuation of Mechanism 044-2, embracing a careful study of paths of mechanical movements and their application to velocity diagrams, quick-return mechanisms, cams and gear-tooth outlines.

PROFESSOR ASHLEY.

*GENERAL ENGINEERING

050-1 ENGINEERING CONFERENCE

Curriculums: All
Third and fourth years,
both semesters

Preparation: —
Two hours per week

This course is the connecting link between the industry and the class room. The third and fourth-year men of each curriculum meet in four separate groups for nine of the ten meetings, during each period. Each student, in turn, gives a thirty to forty-five minute talk on some particular topic of engineering interest. This talk becomes the subject of discussion by the whole class, and the problem is considered in as much detail as seems best to the instructor.

For the tenth meeting of each period all courses meet together in Bates Hall and hear some speaker on a technical subject of live interest to all engineering students.

The marks for the reports written each period while at work, and the marks for the individual talks, are averaged in due proportion to find the grade due the student.

PROFESSORS NIGHTINGALE, ALVORD, ZELLER, SMITH AND STRAHAN

052-1 THESIS

Curriculums: All
Fourth year, both semesters

Preparation: Technical subjects
One hour per week

Each student who is a candidate for graduation must, during his senior year, prepare and present a thesis, the satisfactory completion of which is a pre-requisite for receiving a degree from the School of Engineering. By "thesis" is meant an essay involving the statement, analysis, and solution of some problem in pure or applied science. Its purpose is to demonstrate a satisfactory degree of initiative and a power of

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

original thought and work on the part of each candidate for an engineering degree.

The subject of the thesis is to be decided in conference between the candidate and that faculty member of the professional department to whom he is assigned for supervision in thesis work, final approval, however, resting with the head of the department. This subject may be one of structural design, research, testing, study of a commercial process, etc., but in no case would a mere resumé or prior knowledge and a discussion of the present state of the matter be acceptable. This, it is true, must normally be made, but in addition thereto there must be a certain amount of work planned and executed, aimed towards the extension of the present field of information as regards the subject chosen.

In many cases the student presents an individual thesis. However, in nearly equal number, acceptable subjects will be found necessitating the co-operation of at least two men, either of the same or sometimes of different professional departments. In such cases, each man is primarily responsible for a certain part of the work, while also making himself wholly familiar with the entire problem; and the completed thesis must show clear evidence of the evenly-balanced co-operation and labor of the men concerned.

The completed thesis will be examined for acceptance or rejection from the technical viewpoint by the professional departments interested, and then forwarded to the Dean's office, the final approval of the thesis resting with the Dean.

Upon acceptance, the thesis becomes the property of the School of Engineering, together with all apparatus and material used in connection therewith, except that hired or borrowed, or which was already the personal property of the candidate. It is not to be printed, published, nor in any other way made public except in such manner as the professional department and the Dean shall jointly approve.

For all further information, the candidate for the degree is referred to the "Directions for Theses," which he must obtain from his professional department at the beginning of his senior year.

The arrangement of hours shown in the curriculums may be varied to suit the requirements of each department.

NORTHEASTERN UNIVERSITY

PHYSICAL EDUCATION

060-1 PHYSICAL TRAINING

*Curriculum: All
First year, both semesters*

*Preparation: —
Two hours per week*

All first-year students are required to take Physical Training. Health, strength, and vitality do not come by chance, but by obedience to natural laws. It is very essential for the student to acquire good habits of life. The work in the gymnasium is of the body building type, with plenty of competition. Regular classes in calisthenics are held under an able physical instructor.

Students who are members of the varsity squad in any of the major sports may be excused from Physical Training upon petition to the Faculty, providing the petition is supported by the certification of the athletic coach and physical director. Upon petition of a student to be excused from Physical Training, owing to physical disability, favorable action will be taken by the Faculty only when said petition is accompanied by a physician's certificate, verifying the disability.

MR. SINNETT.

SCHOOL OF ENGINEERING

*DEPARTMENT OF CIVIL ENGINEERING

NOTE—*Pre-requisite Courses*: The following table sets forth the pre-requisite courses in the Department. These must have been completed before advanced courses may be taken. The advanced courses are listed below by years, followed by the pre-requisite courses.

SECOND YEAR

<i>Advanced Courses</i>		<i>Pre-requisite Courses</i>	
023-1	Differential Calculus	020-1	College Algebra and/or
		022-1	Analytical Geometry
21-1	Applied Mechanics	031-1	Physics
11-5	Surveying	11-1	Surveying
		11-2	Surveying
12-1	Railroad Surveying	11-5	Surveying

THIRD YEAR

12-3	Railroad Engineering	12-1	Railroad Surveying
21-3	Strength of Materials	21-1	Applied Mechanics
14-1	Theory of Structures	21-3	Strength of Materials

FOURTH YEAR

15-1	Concrete	21-3	Strength of Materials
14-3	Engineering Structures	14-1	Theory of Structures
14-7	Structural Design	14-6	Structural Drawing

11-1 SURVEYING

Curriculum: I
First year, first semester

Preparation: —
Two hours per week

The courses consist of lectures, recitations, and problem work in which the following subjects are considered: the chain, tape, compass, transit, and level, methods of making and computing both closed and random traverses, location of buildings and points.

PROFESSOR INGALLS.

11-2 SURVEYING

Curriculum: I
First year, second semester

Preparation: II-I
Two hours per week

This course comprises surveying for deeds, city surveying, U. S. system of public land surveying, differential and profile leveling, theory and use of contour maps, stadia methods and various special problems.

PROFESSOR INGALLS.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

NORTHEASTERN UNIVERSITY

11-3 SURVEYING, FIELD-WORK AND PLOTTING

Curriculum: I

First year, first semester

**Preparation: 11-1*

Five hours per week

Two afternoons per week are devoted to preliminary practice with the standard surveying instruments. The work depends upon and is closely allied to the theoretical work in Surveying 11-1. The student first practises taping and chaining, then learns to use the compass for reading magnetic bearings. Then there follows practice with the transit level, and tape, concluding with a large transit and tape closed traverse. This traverse is balanced, plotted, and completed as a map. This includes the location and plotting of streets, buildings, etc., included within the traverse. Work is done on contour maps, with problems; differential and profile leveling; stadia methods; and various special problems such as layout of line and grade for a sewer or a building.

PROFESSOR INGALLS, MR. BAIRD AND ASSISTANTS.

11-4 SURVEYING, FIELD-WORK AND PLOTTING

Curriculum: I

First year, second semester

**Preparation: 11-2, 11-3*

Five hours per week

A continuation of Surveying 11-3.

PROFESSOR INGALLS, MR. BAIRD AND ASSISTANTS.

11-5 SURVEYING

Curriculum: I

Second year, first semester

Pre-requisite: 11-1, 11-2

Two hours per week

The student is taught the theory of plane and geodetic triangulation, the theory of the sextant, the theory of plane table topographical surveying, the adjustments of instruments, and the methods of stellar observation for the determination of azimuth. Surveying problems in review of the elementary work are assigned to make sure that the student has a comprehensive and accurate knowledge of the art.

PROFESSOR INGALLS.

11-6 SURVEYING, FIELD-WORK AND PLOTTING

Curriculum: I

Second year, first semester

**Preparation: 11-5*

Five hours per week

The work follows closely and is dependent upon the theoretical work of Surveying 11-5. Actual practice is given in triangulation, work with the sextant, plane table, field adjustment of instruments and in making an observation on polaris for latitude and azimuth.

PROFESSOR INGALLS AND MR. BAIRD.

SCHOOL OF ENGINEERING

12-1 RAILROAD SURVEYING

Curriculum: I
Second year, second semester

Pre-requisite: 11-5
Three hours per week

The course covers the principles and application of simple, compound, reversed, parabolic, and transition curves to railroad and highway location, also the principals of reconnaissance, preliminary and location survey for a railroad.

PROFESSOR INGALLS.

12-2 RAILROAD SURVEYING, FIELD-WORK AND PLOTTING

Curriculum: I
Second year, second semester

**Preparation: 12-1*
Five hours per week

The work follows closely the theory of Railroad Surveying 12-1. It includes the layout in the field of various railroad curves; the reconnaissance, preliminary and location survey of a line of railroad. Drafting room problems on location of railroads and highways are given.

PROFESSOR INGALLS AND ASSISTANTS.

12-3 RAILROAD ENGINEERING

Curriculum: I
Third year, first semester

Pre-requisite: 12-1
Two hours per week

The work is a continuation of Railroad Surveying 12-1. Methods of computing excavation and embankment, including the use of tables, are studied in detail. Further study is devoted to the effect of haul, and the use of the mass diagram in the determination of the final location. The economics of railroad location are considered.

PROFESSOR INGALLS.

12-4 RAILROAD ENGINEERING, FIELD-WORK AND PLOTTING

Curriculum: I
Third year, first semester

**Preparation: 12-3*
Five hours per week

This course consists of field work in connection with Railroad Engineering 12-3. The final location and profile of the railroad line is plotted. A mass diagram is drawn for the earthwork, and a final computation of cost is made. The line is cross-sectioned and slope-staked.

PROFESSOR INGALLS, MR. BAIRD AND ASSISTANTS.

NORTHEASTERN UNIVERSITY

13-1 HYDRAULICS

Curriculum: I, II
Third year, first semester

Preparation: 21-2
Three hours per week

This course is a study of the principles of both hydrostatics and hydro-dynamics. The subjects considered are: the pressure on submerged areas together with their points of application; the laws governing the flow of fluids through orifices, short tubes, nozzles, weirs, pipe lines and open channels; and the dynamic action of water flowing over both stationary and moving curved surfaces. A short study of stream flow measurements is also included.

PROFESSOR INGALLS.

13-3 HYDRAULICS

Curriculum: III, IV
Third year, second semester

Preparation: 21-2
Two hours per week

The work of this course is similar to Hydraulics 13-1, but adapted to the special needs of the students in these curriculums.

PROFESSOR INGALLS.

14-1 THEORY OF STRUCTURES

Curriculum: I
Third year, second semester

Pre-requisite: 21-3
Three hours per week

The course comprises class and drawing-room work in studying the loads, reactions, shears, and moments acting upon structures of various kinds, such as roofs and bridges. A thorough study is also made of the various functions of the influence line; the methods used to determine the position of moving loads to produce maximum shears and moments on bridges; and the design of beams.

PROFESSOR GRAMSTORFF.

14-3 ENGINEERING STRUCTURES

Curriculum: I
Fourth year, both semesters

Pre-requisite: 14-1
Six hours per week

The computation and design of structures of wood, steel, and masonry by analytical and graphical methods are studied. The subjects considered are: plate girders, roof and bridge trusses of various types, such as simple trusses, bridge trusses with secondary web systems—including Baltimore and Pettit trusses—and trusses with multiple web systems, lateral and

SCHOOL OF ENGINEERING

portal bracing, transverse bents, viaduct towers, and cantilever bridges. A study is also made of the design of columns, tension members, pin and riveted truss joints, trestles of wood and steel, masonry dams, retaining walls, and arches. The student is also given training in the use of the standard handbooks in structural work. The object is to train the student thoroughly in the application of mechanics to the design of structure.

PROFESSOR ALVORD.

14-5 STRUCTURAL DRAWING

Curriculum: I
Third year, first semester

**Preparation: 041-1, 21-3*
Three hours per week

This course consists of the drawing of standard sections of structural steel shapes and connections, and the preparation of drawings representing elementary structural details. The course is designed to familiarize the student with the drawing, dimensioning, and detailing of structural parts.

PROFESSOR GRAMSTORFF.

14-6 STRUCTURAL DRAWING

Curriculum: I
Third year, second semester

Preparation: 14-5
Three hours per week

This is a continuation of Structural Drawing 14-5, but covering the designing and detailing of riveted connections. Short problems in design, typical of those met with in practice are analyzed.

PROFESSOR GRAMSTORFF.

14-7 STRUCTURAL DESIGN

Curriculum: I
Fourth year, first semester

Pre-requisite: 14-6
Six hours per week

The work consists of designing and detailing of structures using the theory learned in Engineering Structures 14-3. Complete working drawings are ordinarily made of some structure of the type of a single track plate girder railroad bridge.

PROFESSOR GRAMSTORFF.

NORTHEASTERN UNIVERSITY

14-8 STRUCTURAL DESIGN

Curriculum: I
Fourth year, second semester

Preparation: 14-7
Six hours per week

Additional work is undertaken in the design and detailing of a simple structure such as a riveted truss, highway or railroad bridge.

PROFESSOR GRAMSTORFF.

15-1 CONCRETE

Curriculum: I₁
Fourth year, both semesters

Pre-requisite: 21-3
Two hours per week

Concrete as a material of construction is studied in detail, and the principles of reinforced concrete design are learned. Computations and designs are made of flat slabs, T beams, columns, footings, retaining walls, and arches.

PROFESSOR ALVORD.

15-2 CONCRETE DESIGN

Curriculum: I₁
Fourth year, both semesters

**Preparation: 15-1*
Three hours per week

This course consists of detailing and making of complete working drawings of the concrete structures designed in Concrete 15-1.

PROFESSOR ALVORD.

15-3 CONCRETE

Curriculum: II₁
Fourth year, first semester

Preparation: 21-3
Two hours per week

Concrete as a material of construction in general, with principles of reinforced concrete design, is studied.

PROFESSOR ALVORD.

16-1 MATERIALS

Curriculums: I, II
Fourth year, first semester

Preparations: 21-3
Two hours per week

A detailed study is made of the methods of manufacturing, properties, and uses of materials used in engineering work; such as iron and steel, lime, cement, concrete, brick, wood, and stone. Methods of testing and strength of various materials used by the engineer are also taken up. Each student is required to prepare a paper on some subject of especial importance, which is assigned by the instructor.

MR. TOZER.

SCHOOL OF ENGINEERING

16-2 TESTING MATERIALS LABORATORY

Curriculum: I

Third year, second semester

Preparation: 21-3

Two hours per week

The work is done by the students and includes tests to determine the elongation, reduction of areas, modulus of elasticity, yield point, ultimate compressive strength of metals, such as steel, cast iron, copper and brass; tensile and compressive tests on timber and concrete; tests to determine the deflection, modulus of elasticity, elastic limit, and ultimate transverse strength of steel and wooden beams, subject to transverse loads. Tests are also made on cement mortars to determine the strength of cubes and briquettes at different ages.

PROFESSOR ALVORD.

16-3 FOUNDATIONS

Curriculum: I₁

Fourth year, first semester

**Preparation: 14-1, 16-1*

Two hours per week

The subjects treated are pile formations—including those of timber and concrete—sheet piles, coffer-dams, box and open caissons, pneumatic caissons, pier foundations in open wells, bridge piers, and abutments.

PROFESSOR GRAMSTORFF.

16-4 GEOLOGY

Curriculum: I

Third year, first semester

Preparation: —

Two hours per week

This is a study of earth movements and the various terrestrial applications of solar energy. The more important geological processes, erosion, sedimentation, deformation, and eruption are taken up and discussed. The latter part of the course is devoted to lectures on the broader structural features of the earth's crust and the application of the principles of structural geology to practical engineering problems.

PROFESSOR ALVORD.

17-1 HIGHWAY ENGINEERING

Curriculum: I₁

Fourth year, second semester

Preparation: 12-1

Two hours per week

In this course are taken up the location, construction, and maintenance of roads, street design, and street drainage; sidewalks; pavement foundations; and the construction, cost and maintenance of the various kinds of roads and pavements, including asphalt, brick, stone-block, wood-block, macadam (both water bound and bituminous), bituminous concrete, hydraulic cement concrete, gravel, and earth. Special consideration is given to the modern concrete road.

PROFESSOR INGALLS.

NORTHEASTERN UNIVERSITY

*DEPARTMENT OF MECHANICAL ENGINEERING

NOTE—*Pre-requisite Courses:* The following table sets forth the pre-requisite courses in the Department. These must have been completed before advanced courses may be taken. The advanced courses are listed below by years, followed by the pre-requisite courses.

SECOND YEAR

<i>Advanced Courses</i>		<i>Pre-requisite Courses</i>	
023-1	Differential Calculus	020-1	College Algebra and/or
		022-1	Analytical Geometry
21-1	Applied Mechanics	031-1	Physics

THIRD YEAR

21-3	Strength of Materials	21-1	Applied Mechanics
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FOURTH YEAR

22-3	Machine Design	21-3	Strength of Materials
23-5	Heat Engineering	23-1	Heat Engineering

21-1 APPLIED MECHANICS (Statics)

Curriculums: All
Second year, first semester

Pre-requisite: 031-1
Preparation: 021-1, 022-1
Three hours per week

The subjects treated are: Collinear, parallel, con-current, and non-current force systems in a plane and in space; the determination of the resultant of such systems by both algebraic and graphical means, special emphasis being placed on the funicular ploygon method for coplanar force systems; the forces required to produce equilibrium in such systems; first moments; and problems involving static friction, such as the inclined plane and the wedge.

PROFESSOR FERRETTI AND MR. BAIRD.

21-2 APPLIED MECHANICS (Kinetics)

Curriculums: All
Second year, second semester

Preparation: 21-1, 023-1
Three hours per week

The subjects treated are: continuation of first moments as applied to varying intensity of force and to the determination of center of gravities of areas and solids; second moments and the application to the determination of moment of inertia of plane and solid figures, radius of gyration, polar moment of inertia; product of inertia principle axes, uniform motion,

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

uniformly accelerated motion, variable accelerated motion, harmonic motion, simple pendulum, rotation, work, energy, momentum and impact.

PROFESSOR FERRETTI AND MR. BAIRD.

21-3 STRENGTH OF MATERIALS

Curriculums: I, II

Third year, both semesters

Pre-requisite: 21-1

Preparation: 023-1, 023-2, 21-2

Three hours per week

The topics covered are: the physical properties of materials, analysis of stress, stresses in beams, deflection of beams, continuous beams, combined stresses, columns, shafting and springs.

PROFESSOR GRAMSTORFF.

21-4 STRENGTH OF MATERIALS

Curriculums: III, IV, V

Third year, first semester

Pre-requisite: 21-1

Preparation: 023-1, 023-2, 21-2

Three hours per week

This course is similar to Strength of Materials 21-3, but more limited in time. The topics omitted are deflection of beams, continuous beams, combined stresses, shafting and springs.

PROFESSOR GRAMSTORFF.

22-1 GRAPHICAL ANALYSIS

Curriculum: II

Third year, first semester

Preparation: 044-3

Six hours per week

Many problems which may readily be solved by graphical methods are included here. Valve gear problems are solved by the use of the various diagrams. The kinematical features of various machines are studied by means of velocity and acceleration diagrams.

PROFESSOR FERRETTI AND MR. WHITTAKER.

22-2 MACHINE DESIGN

Curriculum: II

Third year, second semester

**Preparation: 21-3*

Six hours per week

This is an application of the principles studied in Applied Mechanics. The problem work of the course consists mainly in the design of a steam boiler as the stresses for such a design are known to a great degree of certainty, and the materials of construction are very reliable.

PROFESSOR FERRETTI AND MR. WHITTAKER.

NORTHEASTERN UNIVERSITY

22-3 MACHINE DESIGN

Curriculum: II
Fourth year, first semester

Pre-requisite: 21-3
Preparation: 22-2
Six hours per week

Further practice is given the student in the application of theoretical principles previously studied, and at the same time he becomes familiar with the many practical details which must be considered in design work. The problems taken up in the early part of the course are of a static nature, while the later problems involve dynamical stresses. The problems vary from year to year, but the following are typical of the designs taken up: hydraulic press, arbor press, hydraulic flanging clamp, crane, air compressor, punch and shear, stone-crusher, etc.

In each design, the constructive details are carefully considered, with special attention to methods of manufacture, provision for wear, lubrication, etc. The work is based on rational rather than empirical methods, the student being required to make all calculations for determining the sizes of the various parts and all necessary working drawings.

PROFESSOR ZELLER.

22-4 MACHINE DESIGN

Curriculum: II₁
Fourth year, second semester

Preparation: 22-3
Six hours per week

This course comprises a continuation of Machine Design 22-3 with special reference to designs involving dynamical stresses. A thorough discussion of the principles and methods of lubrication forms a part of the course.

PROFESSOR ZELLER.

22-5 MECHANISMS OF MACHINES

Curriculum: II
Third year, second semester

Preparation: 044-3
Three hours per week

The course is designed to supplement the work in pure mechanism as given in Mechanism 044-3, by a consideration of the application of mechanisms to actual machines, thereby furnishing the student with a series of practical mechanisms to accomplish definite purposes, and increasing his ability to analyze the action of other machines.

PROFESSOR STEARNS.

SCHOOL OF ENGINEERING



SECTION OF ELECTRICAL MEASUREMENTS LABORATORY



SECTION OF ELECTRICAL LABORATORY

NORTHEASTERN UNIVERSITY



MANUFACTURE AND TESTING, RADIO DEPARTMENT
HOLTZER-CABOT ELECTRIC COMPANY



ASSEMBLING AND TESTING, MOTOR DEPARTMENT
HOLTZER-CABOT ELECTRIC COMPANY

SCHOOL OF ENGINEERING

23-1 HEAT ENGINEERING

Curriculum: II
Third year, both semesters

Preparation: 023-2, 033-1
Three hours per week

The fundamental principles underlying the subject of thermodynamics are studied. A study is made of the following topics: the properties of perfect gases, saturated and superheated vapors, air and steam cycles, and the flow of fluids through nozzles, and pipe-lines, and the calculations of an air compressor. In the second half-year the principles of thermodynamics are applied to the various parts of the modern steam power plant. This includes a study of boilers, fuels, and combustion, flue gas analysis, feed-water heaters, chimneys, steam engines, condensers, cooling towers, gas power, steam turbines, and also the methods of testing power plant equipment.

PROFESSOR FERRETTI.

23-3 HEAT ENGINEERING

Curriculum: I, IV, V
Third year, second semester

Preparation: 023-2, 033-1
Three hours per week

The subject matter of heat engineering is presented to the students of civil and chemical engineering to meet their special needs.

PROFESSOR FERRETTI.

23-4 STEAM TURBINES

Curriculum: II₁
Fourth year, second semester

Pre-requisite: 23-1
Preparation: 24-3
Two hours per week

This course is a study of the principles of the flow of fluids, kinetic effects, and thermodynamics with the steam turbine used as a current example. The fundamental differences in the principle of the different types of turbines; the field of application of the steam turbine; and the influence of high vacuum together with the condensing equipment developed for turbine work, are all given careful attention.

PROFESSOR FERRETTI.

23-5 HEAT ENGINEERING

Curriculum: II₁
Fourth year, first semester

Pre-requisite: 23-1
Preparation: 24-3
Three hours per week

A discussion of the theory and apparatus of mechanical refrigeration comprises the greater part of this course. Both

NORTHEASTERN UNIVERSITY

the compression and absorption types of machines are considered. During the latter part of the course, the application of refrigeration to ice making is considered.

PROFESSOR FERRETTI.

23-7 HEAT ENGINEERING

Curriculum: III
Third year, both semesters

Preparation: 023-I, 033-I
Three hours per week

This course is similar in many respects to Heat Engineering 23-1, but less time is devoted to theoretical discussion and the remaining time is spent in a consideration of the types of boilers, engines, and auxiliary equipment. The aim of the entire course is to familiarize the students with the theory and application of prime movers, having fuels as the basis of power, for electrical generation.

PROFESSOR STEARNS.

24-1 PRODUCTION ENGINEERING

Curriculum: II
First year, first semester

Preparation: —
Four hours per week

This is a descriptive course intended to acquaint the student with the organization, methods, and equipment used in industrial plants engaged in quantity production. For purposes of discussion the plant is divided into its various units: such as general offices, drafting-room, pattern-shop, foundry, machine shop, erecting shop, testing-room, etc. The mechanical equipment, filing systems, cost-keeping systems, "follow-up" cards, etc., are described, and representative examples are shown.

MR. TOZER.

24-3 POWER PLANT EQUIPMENT

Curriculum: II, V
Third year, first semester

Preparation: 24-I
Two hours per week

The course is largely a description of the many appliances used in modern power plants. There is also taken up a discussion of boilers and boiler accessories, ash and coal handling systems, the various types of engines—gas engines and turbines—with their valve gears and governing devices, condensers, feed-water heaters, pumps, etc.

PROFESSOR ZELLER.

SCHOOL OF ENGINEERING

24-4 POWER PLANT ENGINEERING

Curriculum: II

Fourth year, second semester

Preparation: 23-1, 24-3

Three hours per week

This course consists of topics and problems chosen largely from engineering practice selected to convey to the engineering students a firm grasp of fundamental principles and engineering methods of attacking and analyzing problems in power plant, not only from the point of view of scientific theory, but also with due consideration of the limitations imposed by practice and by costs. Efficiency and operation costs of different types of plants such as steam, hydro-electric and Diesel engines are also carefully studied to determine the type of plant best suited for the conditions and location involved.

PROFESSOR ZELLER.

24-6 STANDARD ENGINEERING PRODUCTS AND PROCESSES

Curriculums II, III

Fourth year, second semester

Preparation: 16-1

Two hours per week

The course is intended to familiarize the student with the commercial names and sizes of engineering products: such as, bar and plate stock, shafting, tubing, pipes, valves, bearings and hangers, belts, pulleys, etc. A discussion of such manufacturing processes as extrusion, broaching, press work, electric and oxyacetylene welding, cold and hot rolling and drawing, etc., is included.

MR. TOZER.

25-1 INDUSTRIAL PLANTS

Curriculum: II

Fourth year, first semester

second semester

Preparation: 21-3, 24-3

Four hours per week

Six hours per week

The principles involved in the erection, installation, and management of an industrial plant are studied. A description of the different types of structures, with consideration of such details as foundations, walls, columns, floors, windows, etc., is followed by a discussion of the installation of the power plant and machinery. A discussion of illumination, fire-prevention, heating and ventilation, routing of materials, and the organization and management of a plant are taken up. Design problems are given in connection with the course.

PROFESSOR STEARNS.

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26-1 ENGINEERING LABORATORY

Curriculum: II
Third-year, second semester

*Preparation: *23-1, 24-3*
Two hours per week

The course comprises a preliminary series of experiments upon various appliances used in modern power plants to illustrate under actual conditions the principles developed in Heat Engineering 23-1. These exercises are in preparation for more complete tests to be run the following year.

The students here apply the knowledge they have gained in the class room in actual tests, making a complete report of the experiment including method of testing and calculations. The series consist of experiments of which the following may be mentioned as illustrative of the type of work.

Calibration of Gages	Flow of Steam through orifice
Indicator Practice	Flow of Air through orifice
Plain Slide Valve Setting	Steam Injector Test
Steam Calorimeter Test	Condenser Test.

PROFESSOR STEARNS AND MR. ANDERSON.

26-2 ENGINEERING LABORATORY

Curriculum: II₁
Fourth year, first semester

Preparation: 26-1
Four hours per week

The course comprises a series of more complete tests on various power plant equipment over that of 26-1.

Included in the apparatus tested may be mentioned:

Uniflow Steam Engine	Weir Calibration
Gas Engine	Pelton Water Wheel
Air Compressor	Ford Gasoline Engine
Triplex Power Pump	Warren Steam Pump
Refrigerating Machine	Centrifugal Pump
Steam Pulsometer	Steam Turbine
Semi-Diesel Engine	

A complete report in accordance with A. S. M. E. Power Test Code is made on each test, describing machine tested, how test is made, and results from test.

PROFESSOR STEARNS AND MR. ANDERSON.

SCHOOL OF ENGINEERING

26-3 ENGINEERING LABORATORY

Curriculum: II₁

Fourth year, second semester

Preparation: 26-2

Two hours per week

This is a continuation of course 26-2, including work of a similar nature as listed in that course. In addition a boiler test is made on the boilers in the power plant to determine the relative efficiencies of the boilers using both coal and oil.

PROFESSOR STEARNS AND MR. ANDERSON.

26-6 ENGINEERING LABORATORY

Curriculums: II₂, III

Fourth year III, first semester

II₂, second semester

Preparation: 23-1, or 23-7

Two hours per week

This course is a condensation of courses in Engineering Laboratory 26-1 and 26-2, including some of the experiments mentioned in both courses. The work follows along the same general lines.

PROFESSOR STEARNS AND MR. ANDERSON.

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*DEPARTMENT OF ELECTRICAL ENGINEERING

NOTE—*Pre-requisite Courses*: The following table sets forth the pre-requisite courses in the Department. These must have been completed before advanced courses may be taken. The advanced courses are listed below by years, followed by the pre-requisite courses.

SECOND YEAR

<i>Advanced Courses</i>		<i>Pre-requisite Courses</i>	
023-1	Differential Calculus	020-1	College Algebra and/or
		022-1	Analytical Geometry
32-3	Electrical Engineering II	32-1	Electrical Engineering I
21-1	Applied Mechanics	031-1	Physics

THIRD YEAR

32-7	Electrical Engineering III	023-2	Integral Calculus
21-4	Strength of Materials	21-1	Applied Mechanics

FOURTH YEAR

32-9	Electrical Engineering IV	32-7	Electrical Engineering III
34-1	Electrical Engineering V	13-3	Hydraulics

30-1 APPLIED ELECTRICITY I

Curriculum: I, II, IV, V
Second year, first semester

Preparation: 022-1, 031-1
Three hours per week

This course is the foundation for subsequent electrical engineering work for students of Civil, Mechanical, and Chemical Engineering. Emphasis is laid on the fundamental principles, and the subject is developed by elaborating these principles through numerical applications. The topics discussed during the first period are, briefly: magnets, and magnetism, electric resistance and Ohm's law, electric work and power, series and parallel circuits, Kirchoff's laws, electro-magnetism, electro-magnetic induction, magnetic properties of iron, electrolysis and batteries. During the second period, the course varies somewhat in content, depending upon the particular branch of engineering which the students in the class are studying. In all, however, some time is devoted to a consideration of various direct current machines and appliances, their characteristics and applications.

PROFESSOR WINKFIELD.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

30-3 APPLIED ELECTRICITY II

Curriculum: I, II, IV, V
Second year, second semester

Preparation: 30-1
Three hours per week

The object is to fit the student to handle intelligently A. C. electrical problems that are likely to come up in connection with his chosen field. The topics discussed during the first period are, briefly: Alternating currents and voltages, inductance, capacitance; and circuits containing resistance, inductance and capacitance. In the second period, the time is devoted to a consideration of various subjects of especial interest to the particular curriculum concerned.

PROFESSOR WINKFIELD.

30-4 APPLIED ELECTRICITY LABORATORY

Curriculums: I, II
Second year, both semesters

*Preparation: *30-1, *30-3*
Three hours per week

The characteristics and operation of direct and alternating current machinery, discussed in course 30-3, are studied. The experiments deal with the following: resistance measurement, speed control direct-current motors; voltage control of generators; voltage regulation of direct-current generators; speed regulation of direct-current motors; brake tests of various types of direct and alternating-current motors; measurement of losses and the calculating of the efficiency of motors and generators; alternating current circuits containing resistance, inductance, and capacitance; determination of the characteristics of transformers; various polyphase connections; regulation of alternators; synchronous motor, rotary converter, and induction motor characteristics. A written report is required on each experiment, and especial care is exercised that such reports be correct in manner and form.

PROFESSOR WINKFIELD AND ASSISTANTS.

32-1 ELECTRICAL ENGINEERING I

Curriculum: III
First year, first semester
second semester

Preparation: —
Two hours per week
Three hours per week

This course is a study in detail of the electric current, electromotive force and resistance, electrical work and power, electrical circuits, Kirchoff's laws, primary and secondary batteries, magnetism, electro-magnetism, electro-magnetic

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induction, self and mutual inductance, electro-statics, energy stored in the electro-magnetic and electro-static field. The practical units of measurement are discussed, as the several quantities to which they apply are successively reached. This is the fundamental electrical course of the curriculum and covers the matters usually taken up in a course of college physics, but in a more thorough manner and rather more from an engineering standpoint.

PROFESSOR WINKFIELD.

32-3 ELECTRICAL ENGINEERING II

Curriculum: III
Second year, both semesters

Pre-requisite: 32-1
Preparation: 022-1
Three hours per week

The course comprises a careful, though more or less descriptive, discussion of the dynamo in general armature windings, armature reactions and their compensation, commutation, etc., followed by a thorough study of the direct-current machine both as generator and motor, during the first semester; and, during the second semester, a consideration of the methods of testing for efficiency and performance followed by some examination of the applications of the machines studied, as, parallel operation, three-wire systems, boosters and balancers, special motor application and control methods. Much emphasis is placed upon the working out of practical problems.

PROFESSOR SMITH.

32-4 ELECTRICAL ENGINEERING II, LABORATORY

Curriculum: III
Second year, both semesters

**Preparation: 32-3*
Six hours per week

This course consists of a carefully selected series of experiments intended to exemplify qualitatively, and in the clearest manner, the principles developed in the parallel lectures, 32-3. It includes a series of about twenty experiments, of which the following may be mentioned as illustrative of the type of work:

The starting of a shunt motor, and starting devices.

The speed, field, and voltage relations in a separately excited machine.

The heat test of a generator.

The characteristic curves of generators.

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The parallel operation of shunt and compound generators.

The three-wire balancer set.

The speed and torque curves of the series motor.

Satisfactory completion of fifteen experiments is the minimum acceptable amount of work.

Since the purpose of the course is in part to develop correct methods of work, it is intended that the whole of the preparatory work, as well as the working up of the data obtained, shall be done in the laboratory under supervision of the instructor, so far as necessary.

MR. BINGHAM AND ASSISTANT.

32-6 ELECTRICAL ENGINEERING III, LABORATORY

Curriculum: III

Third year, both semesters

*Preparation: 32-4, *32-7, *33-1*

Six hours per week

The course consists of a series of experiments involving the testing of machines; together with experiments intended to elucidate practically the principles developed in the parallel course on alternating currents, 32-7, and also to train the student in the use of the special types of instruments which he will later use in laboratory work upon alternating current machinery.

Illustrative experiments are:

Stray power tests, Prony brake tests, retardation tests, pumping back tests, regulation tests, heat runs, analysis of losses, etc.

Study of A.C. series and parallel circuits, resonant conditions effect of frequency change on circuit constants, parallel operation of A. C. machines, synchronizing and changing load, power factor measurements, power measurement in polyphase circuits, etc.

As the course progresses, the student is thrown more and more upon his own resources; a desired result is stated to him, and he is left to plan out his own methods, settle upon the apparatus needed, solve his precision requirements, calibrate the instruments, if necessary, and finally turn in a detailed report covering all phases of the work from its inception.

PROFESSORS PORTER AND RICHARDS.

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32-7 ELECTRICAL ENGINEERING III

Curriculum: III
Third year, both semesters

Pre-requisite: 023-2
Preparation: 32-3
Three hours per week

Lectures, recitations and problem work upon the electro-magnetic and electro-static fields and the theory of alternating currents are taken up. The course covers the consideration of the "steady state," both when we have a pure sine wave and when we have a complex wave. Transients are not considered. The subject is developed principally by the aid of vector algebra, and the student is urged to use the methods of complex quantity to the fullest extent.

Application of the principles developed to all possible combinations of resistance, inductive and condensive reactances in both single and polyphase circuits is given by the working of about two hundred problems involving both analytical and graphical methods.

PROFESSORS SMITH AND PORTER.

32-8 ELECTRICAL ENGINEERING IV, LABORATORY

Curriculum: III
Fourth year, both semesters

*Preparation: *32-9*
Six hours per week

This is a laboratory course to accompany course 32-9 in alternating current machinery. The work includes tests on the heating, efficiency, and determination of the characteristics of the various types of alternating-current machinery, such as transformers, generators, and motors. A detailed preliminary study is made of each assigned experiment, involving the theoretical principles, the method of procedure to obtain the required results, and the way in which the results should be worked up. This is embodied in a preliminary report. The student then does the necessary laboratory work to obtain the required data; and finally works up the whole into a detailed final report. The assistance given by the instructor is reduced to a minimum, the initiative and resourcefulness of the student being depended on to the greatest extent.

PROFESSOR RICHARDS AND ASSISTANT.

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32-9 ELECTRICAL ENGINEERING IV

Curriculum: III

Fourth year, both semesters

Pre-requisite: 32-7

Four hours per week

This is a careful, thorough, and detailed discussion of the construction, theory, operating characteristics, and testing of the various types of alternating current machinery. The first half of the course is equally divided between the transformer and the synchronous generator. In the second half of the course synchronous motors, parallel operation of alternators, synchronous converters, polyphase induction motors, the induction generator, single phase induction motors, and commutating alternating-current motors are taken up. One two-hour period a week is spent in the solution of numerical problems.

PROFESSOR RICHARDS.

33-1 ELECTRICAL MEASUREMENTS

Curriculum: III

Third year, both semesters

Preparation: 023-2, 32-3

Two hours per week

A brief discussion of measurement in general and electrical measurements in particular, in which a review of the electrical units and their definitions has a part, is taken up. Resistance devices, galvanometers, ammeters, and voltmeters are next discussed, the treatment of other instruments being taken up later in connection with their uses. This is followed by a detailed discussion of the methods, of measuring the various electrical quantities—resistance, resistivity, conductivity, current, electromotive force, capacitance, inductance, magnetic induction, permeability, hysteresis loss, energy, and power. The student is given a thorough discussion of the construction, theory of operation, method of use, sources of error, etc., of the types of measuring instruments used in commercial work and in the standardizing laboratory.

PROFESSOR PORTER.

33-2 ELECTRICAL MEASUREMENTS LABORATORY

Curriculum: III

Third year, second semester

*Preparation: *33-1*

Three hours per week

This course consists of a series of experiments, emphasizing the principles developed in course 33-1. The student becomes familiar with the use of the standard apparatus in use in testing laboratories. Particular stress is laid on the correct use of the apparatus, and precision discussions are required throughout.

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The experiments cover such matters as the measurement of resistance by various methods, resistivity, conductivity, electromotive force, current inductance, capacitance, magnetic induction, magnetizing force, hysteresis loss, etc., in cable testing, magnetic testing, wave form determination, and the use of special apparatus.

Thorough training in the principles of precision of measurements is also given, and applied to each experiment performed.

PROFESSOR PORTER.

33-4 ADVANCED STANDARDIZING LABORATORY

Curriculum: III

Fourth year, first semester

Preparation: 33-2

Three hours per week

This laboratory course is given over to the use of Laboratory and Secondary standards, and precision methods as applied to checking resistances, calibration of instruments of various types including the checking of the instruments used in the other laboratory courses.

It involves the use of the potentiometer, Weston laboratory standard instruments; Standard Wheatstone, Kelvin Low Resistance & Carey-Foster bridges, etc.

Precision work is insisted on throughout, and while the student is trained to develop speed and quickness of manipulation, this is never at the expense of quality and accuracy of the work.

PROFESSOR PORTER.

34-1 ELECTRICAL ENGINEERING V

Curriculum: III

Fourth year, both semesters

Pre-requisite: 13-3

*Preparation: 23-7, *32-9*

Four hours per week

This course is divided into two parts carried along parallel to each other.

(a) A study of the organization of the central station, both steam and hydro-electric, attention being given to both engineering and economic details, the influence of each upon the cost of power being kept always in view. Following this is a careful study of the high tension transmission line, potentials used, spacing, line characteristics, losses, transient phenom-

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ena, etc. Particular attention is given to the use of the function of complex and hyperbolic angles to the calculation of the line.

(b) Assuming power delivered to the substation distributing busses, the matter of its utilization is discussed, taking up electric railways, exterior and interior illumination, motor application in various branches of industry and same consideration of the National Electric and National Safety Codes.

PROFESSOR SMITH.

35-1 ADVANCED ELECTRICITY

Curriculum: III

Fourth year, both semesters

Preparation: 32-7, 33-1, 40-1

Two hours per week

The course is given over to a full discussion of modern electrical theory, the development is traced from Faraday through the work of Kelvin, Maxwell and Herz on the one hand, and that of Crookes, Thompson, Millikan, etc., on the other. The subjects of ionization, ionizing, radiations, metallic, electrolytic and gaseous conduction, electromagnetic mass, electrical constitution of matter are discussed together with the matter of electromagnetic radiation, the propagation of waves along wires and through space; and the principles of the thermionic valve in its various forms.

PROFESSOR SMITH.

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*DEPARTMENT OF CHEMICAL ENGINEERING

NOTE—*Pre-requisite Courses*: The following table sets forth the pre-requisite courses in the Department. These must have been completed before advanced courses may be taken. The advanced courses are listed below by years, followed by the pre-requisite courses.

SECOND YEAR

<i>Advanced Courses</i>		<i>Pre-requisite Courses</i>	
43-1	Quantitative Analysis	42-1	Qualitative Analysis
023-1	Differential Calculus	020-1	College Algebra and/or
		022-1	Analytical Geometry
21-1	Applied Mechanics	031-1	Physics

THIRD YEAR

44-1	Technical Analysis	43-1	Quantitative Analysis
21-4	Strength of Materials	21-1	Applied Mechanics

FOURTH YEAR

46-3	Chemical Engineering	46-2	Chemical Engineering
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40-1 INORGANIC CHEMISTRY

Curriculum: II, III, V
First year, first semester

Preparation: —
Four hours per week

This course, inorganic chemistry, is designed to meet the needs of students in non-chemical courses. A brief discussion of the general principles of chemistry as applied to engineering, with the idea of illustrating the applications of chemistry to special lines of engineering work, is taken up.

PROFESSOR MCGUIRE AND MR. BAKER.

40-1a INORGANIC CHEMISTRY

Curriculum: I
Third year, second semester

Preparation: —
Four hours per week

The course is intended to familiarize the student with the principles of Inorganic Chemistry. The latter part of the course deals with the application of Chemistry to Civil Engineering.

MR. BAKER.

41-1 INORGANIC CHEMISTRY

Curriculum: IV
First year, both semesters

Preparation: —
Four hours per week

The fundamental principles of the science are taught by means of experimental lectures. Topics of a broad general character are taken up in the first part of the subject, in con-

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

SCHOOL OF ENGINEERING

nection with the descriptive chemistry of the non-metallic elements, followed later by more specialized work in connection with the elements. Recitations will include a short written test on the two lectures of the week. Special attention is given to chemical calculations based on practical application.

PROFESSOR STRAHAN.

41-2 INORGANIC CHEMISTRY LABORATORY

Curriculum: IV
First year, both semesters

*Preparation: *41-1*
Five hours per week

The object is to cultivate scientific attitude and habit of thought on the part of the student, and to increase his power of acquiring knowledge, whether it be from book, lecture, or from experiment. The experiments are planned to illustrate the topics which have been discussed in the lecture room. Careful manipulations, thoroughness in observation, accuracy in arriving at conclusions, are required of each student. In this, as in all subsequent laboratory work, neat and satisfactory notes will be considered an essential part of the work.

PROFESSOR STRAHAN AND MR. BAKER.

42-1 QUALITATIVE ANALYSIS

Curriculum: IV
First year, summer term

Preparation: 41-1
Ten hours per week

The course is designed not merely to consider the procedures used in the detection of the common elements, but to deal in a much broader way with the principles involved in chemical analysis and to broaden the student's knowledge of inorganic chemistry, especially the chemistry of the metallic elements. A great deal of time is devoted to the study of the principles of hydrolysis, solubility product, correct concentration, amphoteric substances, and the general laws of solutions. In the latter part of the course the analysis of unusual mixtures will be discussed with especial emphasis on the interpretation of analytical results.

PROFESSOR MCGUIRE.

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42-2 QUALITATIVE ANALYSIS LABORATORY

Curriculum: IV

First year, summer term

*Preparation: *42-1*

Twenty-eight hours per week

After a series of preliminary experiments illustrating principles and giving opportunity for practice in writing equations, the analysis of unknown substances is undertaken, beginning with solutions and simple salts, and later analyzing minerals, pigments, slags, alloys, and various commercial products, such as boiler compounds, cleaning powders, glass enamels, and similar inorganic substances.

PROFESSOR MCGUIRE.

43-1 QUANTITATIVE ANALYSIS

Curriculum: IV

Second year, first semester

Pre-requisite: 42-1

Two hours per week

This course is intended to furnish a broad but thorough foundation for any subsequent analytical work which the student may be called upon to perform. Certain typical analyses are taken up in detail and considered from this point of view. As the correct calculation of analytical results is of no less importance than the actual procedures of analysis, a number of problems form a very important part of the course.

PROFESSOR MCGUIRE.

43-2 QUANTITATIVE ANALYSIS LABORATORY

Curriculum: IV

Second year, both semesters

*Preparation: *43-1*

Five hours per week

This course consists of laboratory work illustrating the methods taken up in course 43-1. After acquiring familiarity with the various measuring instruments, the student performs the analyses which were discussed in the class-room, at the same time acquiring the manipulative skill and accuracy necessary for successful analytical work.

PROFESSOR MCGUIRE.

44-1 TECHNICAL ANALYSIS

Curriculum: IV

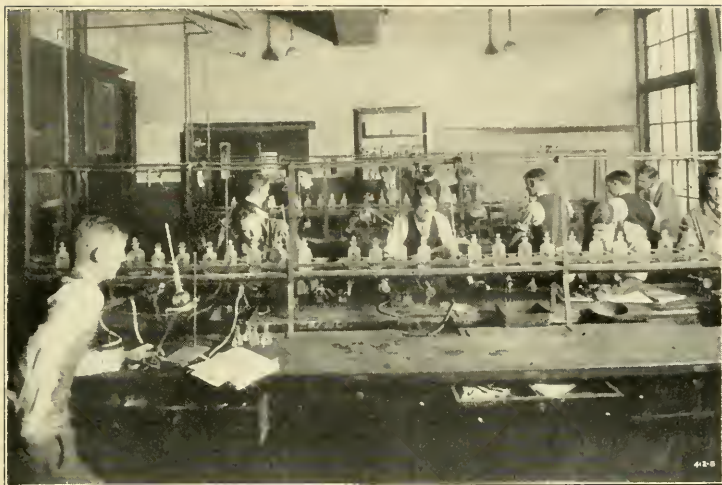
Third year, first semester

Pre-requisite: 43-1

Three hours per week

This course, which is a continuation of course 43-1, applies the principles taken up there to actual commercial problems. Each method is taken up from the standpoint of rapidity, accuracy, and adaptability to the problem at hand. The work

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CLASS IN ORGANIC CHEMISTRY



CLASS IN TECHNICAL ANALYSIS

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RESEARCH LABORATORY, MERRIMAC CHEMICAL COMPANY



ANALYZING SOAP, LEVER BROS. LABORATORY

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will be varied from year to year but will be taken from the analysis of steel, coal, ores, gases, oils, water, paints and varnishes, etc.

PROFESSOR MCGUIRE.

44-2 TECHNICAL ANALYSIS LABORATORY

Curriculum: IV

Third year, first semester

Preparation: 43-2

Five hours per week

The laboratory work is to illustrate the methods discussed in course 44-1. A number of short routine analyses are performed in such a way as to acquire speed without the sacrifice of correctness of technique. The latter part of the course will consist of individually assigned problems upon the subjects in which the student is particularly interested.

PROFESSOR MCGUIRE.

44-3 TECHNICAL ANALYSIS

Curriculum: IV

Third year, second semester

Preparation: 44-1

Two hours per week

This course is designed to cover in a brief manner the subject of metallography. The metallographic methods of investigation, including preparation of sample, etching, and microscopic examination will be discussed. A discussion of the more common non-ferrous alloys including bearing metals, type metals, solders, and brass will be undertaken by the interpretation of their temperature, composition diagrams and application to the Phase Rule. A portion of the time will also be devoted to the iron-carbon diagram, which will include the metallurgy and metallography of cast iron, malleable iron, carbon steels, and special steels.

PROFESSOR MCGUIRE.

45-1 ORGANIC CHEMISTRY

Curriculum: IV

Third year, both semesters

Preparation: 43-1, 44-1

Three hours per week

The course consists of the underlying principles and theories of organic chemistry, the methods of preparation and characteristic reactions of carbon compounds. The important organic compounds will be considered in detail, because they serve as the most convenient examples for illustrating fundamental principles which elucidate the chemical character of substances which are of practical importance.

PROFESSOR STRAHAN.

NORTHEASTERN UNIVERSITY

45-2 ORGANIC CHEMISTRY LABORATORY

Curriculum: IV
Third year, both semesters

*Preparation: *45-1*
Five hours per week

This course comprises the operations, apparatus, and the laboratory technique involving in organic work such as fractional distillation, extraction, crystallization, steam distillation, determinations of melting points, boiling points, and the like. It deals also with general methods of preparation, such as etherification, saponification, sulphonation, diazotization, etc. The student will prepare a number of compounds—including nitro-benzene, aniline, ethers, phenols, and other typical organic substances.

PROFESSOR STRAHAN.

45-3 ORGANIC CHEMISTRY

Curriculum: IV
Fourth year, both semesters

Preparation: 45-1
Two hours per week

A review of course 45-1 is given, but the subject is studied from a more mature point of view to furnish the student a more thorough survey of the fundamental principles which underlie the modern developments in this branch of chemistry.

Emphasis is placed on the effect of the nature of organic radicals on the properties of the compounds containing them, the effect of unsaturation, and the influence of structure and substituents on the activity of groups and the laws of substitution.

Industrially important compounds are treated more at length than those of a more purely scientific use and of interest to the advanced students only.

During the latter part of the course outside reading will be assigned in the scientific journals, followed by reports and discussions.

PROFESSOR STRAHAN.

45-4 ORGANIC CHEMISTRY LABORATORY

Curriculum: IV
Fourth year, both semesters

*Preparation: *45-3*
Five hours per week

The work consists of preparations and reactions of the typical organic substances, including the methods of separation and identification of simple mixtures. The instruction also includes a study of the qualitative tests for the important

SCHOOL OF ENGINEERING

groups occurring in organic compounds, together with the other physical data which would give valuable information as to the nature of the compound under examination.

The student is given several unknown pure compounds and mixtures to analyze which trains him to use his head as well as the information supplied in his text-books.

PROFESSOR STRAHAN.

46-2 CHEMICAL ENGINEERING

Curriculum: IV
Third year, second semester

*Preparation: *13-3, *23-3, 43-1*
Two hours per week

The course consists of the study of basic principles such as the Law of Conservation of Elements, the Law of Conservation of Energy, and the Stoichiometrical Relationships of Solids and Gases. It is desired by the correlation of theoretical principles in the form of industrial plant problems to enlarge the viewpoint of the student and prepare him for Chemical Engineering 46-3.

MR. BAKER.

46-3 CHEMICAL ENGINEERING

Curriculum: IV
Fourth year, both semesters

Pre-requisite: 46-2
Three hours per week

This is a continuation of the study of the principles underlying the mechanical operations involved in chemical industries together with a study of the apparatus used to perform these operations. The subjects of crushing and grinding, separation, flow of heat, flow of fluids, evaporation, distillation, and drying, are considered in detail, accompanied by the solution of typical problems of a chemical engineering nature.

MR. BAKER.

47-1 INDUSTRIAL CHEMISTRY

Curriculum: IV
Fourth year, first semester
second semester

Preparation: 44-1, 45-1
Three hours per week
Two hours per week

The more important industrial processes are studied with a view to the general chemistry involved and to the various types of apparatus necessary to carry out the chemical reactions. The student is given a broad survey of the field of

NORTHEASTERN UNIVERSITY

chemical industry and a knowledge of the relationships of the different industries to one another. The industries studied include the production of acids, alkali, fertilizers, glass, pigments, cements, soap, explosives, paper, petroleum, illuminating gas and other general chemicals.

MR. BAKER.

47-2 INDUSTRIAL CHEMISTRY LABORATORY

Curriculum: IV
Fourth year, both semesters

Preparation: 44-2
Four hours per week

The quantitative study of the preparation and purification of a small number of chemical products, selected as types of reactions of industrial importance, is made. The processes employed are carefully controlled, and the final products are analyzed to determine their purity. When the work is completed, a careful detailed report of each process is made and discussed in class.

MR. BAKER.

48-1 PHYSICAL CHEMISTRY

Curriculum: IV
Fourth year, both semesters

Preparation: 42-1, 43-1, 44-1
Four hours per week

Physical, or General Chemistry is taken up largely from a quantitative standpoint, and throughout the entire course, great emphasis is placed upon the problem work. Molecular and atomic weights, properties of substances in the gaseous, liquid, and solid states, solutions, both ionized and non-ionized, homogeneous and heterogeneous equilibrium, thermochemistry and electrochemistry are developed in this manner, while the remaining topics, largely descriptive, are treated more briefly.

PROFESSOR MCGUIRE.

SCHOOL OF ENGINEERING

DEPARTMENT OF ADMINISTRATIVE ENGINEERING

NOTE—*Pre-requisite Courses*: The following table sets forth the pre-requisite courses in the Department. These must have been completed before advanced courses may be taken. The advanced courses are listed below by years, followed by the pre-requisite courses.

SECOND YEAR

<i>Advanced Courses</i>		<i>Pre-requisite Courses</i>	
023-1	Differential Calculus	020-1	College Algebra and/or
		022-1	Analytical Geometry
21-1	Applied Mechanics	031-1	Physics

**50-1 INDUSTRIAL ORGANIZATION

†*Curriculum*: I₂, II₂, V
Third year, first semester

**Preparation*: 014-1
Three hours per week

This course takes up the types of business organization, including the individual enterprise, the partnership, the corporation, the joint stock company, and the legal trust. A study is made of the advantages of combinations and the effect of legal regulations.

PROFESSOR SCHLAGENHAUF.

50-2 INDUSTRIAL FINANCE

†*Curriculum*: I₂, II₂, V
Third year, second semester

**Preparation*: 50-1
Two hours per week

This course deals with the sources of capital for our industrial enterprises, promotion, the marketings of the securities, providing of working capital, determination of dividends, insolvency, receivership and reorganization.

PROFESSOR SCHLAGENHAUF.

50-6 BUSINESS ADMINISTRATION I

Curriculum: V
Fourth year, first semester

**Preparation*: 50-2
Three hours per week

The physical and the human factors are carefully considered. Particular attention is given to the problem of securing the maximum efficiency in the production of goods by proper location, layout, and equipment of the manufacturing plant, the correct sequence and control of the manufacturing processes.

PROFESSOR ROLLAND.

**Not given 1924-1925.

†Fourth year I₂, II₂. Three hours per week.

*Preparation courses marked with asterisk and the advanced course may be carried simultaneously.

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50-6 BUSINESS ADMINISTRATION II

Curriculum: V
Fourth year, second semester

Preparation: 50-2
Three hours per week

This course deals with the organization and management of the factory office. The following matters are considered: location and layout of the office, standardization of equipment, and the work, and the employment, education, training, and methods of compensation of the office employees.

PROFESSOR ROLLAND.

50-8 BUSINESS ADMINISTRATION I

Curriculum: Full-time
Third year, first term

Preparation: —
Three hours per week

The physical aspect of the manufacturing plant is studied. Some of the more important things considered are location and layout of the plant, buildings and equipment, power, time and motion study, purchasing and stores, planning and scheduling.

PROFESSOR ROLLAND.

50-9 BUSINESS ADMINISTRATION II

Curriculum: Full-time
Third year, second term

Preparation: —
Three hours per week

In this course the human factor in production is emphasized. Careful consideration is given to such matters as the organization of the labor force, the hiring, training and compensating of the workmen and foreman, joint control by workmen and management, and welfare work.

PROFESSOR ROLLAND.

50-9a BUSINESS ADMINISTRATION III

Curriculum: Full-time
Third year, third term

Preparation: —
Three hours per week

This course deals with the organization and management of the factory office. The following matters are considered: location and layout of the office, standardization of equipment, and the work, and the employment, education, training, and methods of compensation of the office employees.

PROFESSOR ROLLAND.

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****50-11 BUSINESS PRINCIPLES I**

*Curriculum: Full-time
Second year, first term*

*Preparation: —
Three hours per week*

The three courses in Business Principles serve as an introduction to the other business and industrial courses giving the student a foundation and background for the study of those courses.

Business Principles I covers the organization and financing of business enterprises and the management of the plants and offices of such establishments.

PROFESSOR ROLLAND.

****50-11a BUSINESS PRINCIPLES II**

*Curriculum: Full-time
Second year, second term*

*Preparation: —
Three hours per week*

This course is a continuation of course I, and deals with wage systems and wage control, selling, advertising and traffic.

PROFESSOR ROLLAND.

****50-11b BUSINESS PRINCIPLES III**

*Curriculum: Full-time
Second year, third term*

*Preparation: —
Three hours per week*

This course treats of the following topics: foreign trade, credit, business forecasting, banking, exchange, accounting, and financial statements.

PROFESSOR ROLLAND.

51-3 ELEMENTS OF ACCOUNTING

*Curriculum: V
Third year, first semester*

*Preparation: —
Four hours per week*

The aim of this course is to teach the fundamental principles of bookkeeping. This involves a study of the underlying principles of debits and credits, journalizing, posting to the ledger, and the preparation of the trial balance, profit and loss statement, financial statement, and the balance sheet.

PROFESSOR ROLLAND.

****Not given 1925-1926.**

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51-6 INDUSTRIAL PROBLEMS

Curriculum: V
Fourth year, second semester

Preparation: —
Two hours per week

This course deals with wastes of industry; relation of state to industry; welfare of employees, including group insurance and workmen's compensation; relation to the general public, publicity, and so forth.

PROFESSOR SCHLAGENHAUF.

51-7 PERSONNEL ADMINISTRATION

Curriculum: V
Fourth year, second semester

Preparation: —
Three hours per week

This course contemplates a brief survey of the psychology of the workmen, tests for placement, mental alertness and ability tests, employment methods, education of workmen, wage payments, and relation of labor to industry and capital.

PROFESSOR SCHLAGENHAUF.

**52-2 MONEY AND BANKING I

Curriculum: Full-time
Second year, first term

Preparation: —
Three hours per week

This course deals with the nature of money and exchange, and the organization and administration of the modern commercial bank from the practical point of view.

PROFESSOR ROLLAND.

**52-2a MONEY AND BANKING II

Curriculum: Full-time
Second year, second term

Preparation: —
Three hours per week

This is a continuation of Money and Banking I and treats the non-commercial banks as investment banks, etc., in a similar manner.

PROFESSOR ROLLAND.

**52-2b MONEY AND BANKING III

Curriculum: Full-time
Second year, third term

Preparation: —
Three hours per week

A comparative study is made of the principal banking systems of the world. Careful consideration is also given to such matters as the relationship of government, prices, money movement, and business to banking.

PROFESSOR ROLLAND.

**Not given 1925-1926.

SCHOOL OF ENGINEERING

52-2c MONEY AND BANKING

Curriculum: V
Third year, second semester

Preparation: ———
Three hours per week

A broad view is given by the whole field of banking. The practical side of banking is emphasized in the study of the organization and operation of the commercial and investment banks. The various banking systems of the principal countries of the world are also considered.

PROFESSOR ROLLAND.

53-2 BUSINESS LAW I

Curriculum: Full-time
Third year, first term

Preparation: ———
Three hours per week

The main part of the course covers the nature of contracts, parties to them, and their legality and interpretation. It also deals with the nature and formation of agency, the duties and liabilities arising out of agency, the various sorts of agents, and the termination of the agency contract.

MR. MONTGOMERY.

53-2a BUSINESS LAW II

Curriculum: Full-time
Third year, second term

Preparation: ———
Three hours per week

The things emphasized in this course are as follows: negotiable instruments, partnership, corporations, sales of personal property, and conditional sales.

MR. MONTGOMERY.

53-2b BUSINESS LAW III

Curriculum: Full-time
Third year, third term

Preparation: ———
Three hours per week

This course includes a study of bailments, guarantee and suretyship, mortgages, real property, landlord and tenant, taxes, and insurance.

MR. MONTGOMERY.

53-3 BUSINESS LAW I

Curriculum: V
Fourth year, first semester

Preparation: ———
Three hours per week

A thorough study is made of the various phases of contracts including negotiable contracts that are of most value to engineers, and of the nature, formation and termination of agency.

MR. MONTGOMERY.

NORTHEASTERN UNIVERSITY

53-3 BUSINESS LAW II

Curriculum: V
Fourth year, second semester

Preparation: —
Three hours per week

Corporation law is given special emphasis in this course. Other things considered are as follows: partnership, sales of personal property, conditional sales, bailment, guarantee and suretyship, mortgages, real property, landlord and tenant, taxes, and insurance.

MR. MONTGOMERY.

54-2 ECONOMIC GEOGRAPHY

†Curriculum: I₂, II₂, V
Second year, first semester

Preparation: —
Two hours per week

This course gives a foundation for the study of Foreign Trade, Marketing, and Transportation. It deals with the regions and methods of production of food stuffs and raw materials, the location of our principal industries, the processes of manufacture, and the world's routes.

PROFESSOR ROLLAND.

54-3 MARKETING

Curriculum: V
Fourth year, first semester

Preparation: —
Three hours per week

A study is made of the movement of the raw materials and food stuffs from the point of origin to the factory, and of the finished products to the place of final consumption.

This requires a consideration of the marketing factors involved in moving the raw products, and of the distributive organization for the marketing of the finished products such as sales organization of the various sorts of retailers.

PROFESSOR ROLLAND.

54-7 FOREIGN TRADE

Curriculum: I₂, II₂, V
†Second year, second semester

Preparation: —
Two hours per week

The purpose of this course is to familiarize the student with the foreign markets, the methods used in securing trade information, the commercial policies of foreign countries, the importing and exporting machinery, both governmental and private, the technique of foreign trade, and trade regulations.

PROFESSOR ROLLAND.

†Fourth year I₂, II₂.

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54-8 RAILROAD TRANSPORTATION

Curriculum: V

Third year, second semester

Preparation: ———

Three hours per week

The aim here is to give the student a knowledge of the theoretical and practical side of the railroad business. The following things are considered: The theory of rate making, rate classification, the rate structure and rate districts, and such problems as personal and local discrimination, demurrage, organization, financing and reorganization of railroads.

PROFESSOR ROLLAND.

54-9 SALESMANSHIP

Curriculum: V

Third year, second semester

Preparation: ———

Three hours per week

This course deals with the art of salesmanship, which includes a consideration of such matters as the qualification necessary for successful salesmanship, preparation or selling talk, the approach, and the interview. Others things studied are the characteristics of good salesmen, their training and their compensation.

PROFESSOR ———

NORTHEASTERN UNIVERSITY

COURSES OF INSTRUCTION

No.	SUBJECT	Curriculum	Year
010-1	English	All	1
010-2	Literature I	Full-time	2
010-3	Literature II	Full-time	2
010-4	Literature III	Full-time	2
010-5	Public Speaking I	Full-time	3
010-6	Public Speaking II	Full-time	3
010-7	Public Speaking III	Full-time	3
011-1	German	IV	2
011-2	German	IV	3
012-1	History of Science	I, II, III	1
012-2	Modern History I	Full-time	2
012-3	Modern History II	Full-time	2
012-3a	Modern History III	Full-time	2
012-4	United States History	V	1
013-1	Government I	Full-time	2
013-1a	Government II	Full-time	2
013-1b	Government III	Full-time	2
013-2	American Government	V	1
*014-1	Economics I	All	3
*014-1a	Economics II	All	3
014-2	Sociology I	Full-time	3
014-3	Sociology II	Full-time	3
014-3a	Sociology III	Full-time	3
014-4	Psychology I	Full-time V	2
014-4a	Psychology II	Full-time V	2
014-4b	Psychology III	Full-time	2
014-5	Outline of Ethics I	Full-time	3
014-5a	Outline of Ethics II	Full-time	3
014-5b	Outline of Ethics III	Full-time	3
014-6	Labor Problems	V	4
014-8	Modern Social Problems I	Full-time	3
014-8a	Modern Social Problems II	Full-time	3
014-8b	Modern Social Problems III	Full-time	3
014-9	Social Origins	V	1
020-1	College Algebra	All	1
021-1	Trigonometry	All	1
022-1	Analytic Geometry	All	1
023-1	Differential Calculus	All	2
023-2	Integral Calculus	All	2
030-1	Physics	All	1
031-1	Physics	All	1
032-1	Light	All	2
033-1	Heat	All	2
034-1	Physics Laboratory	All	1
034-2	Physics Laboratory	All	2
034-3	Physics Laboratory	All	2
041-1	Mechanical Drawing	All	1
041-2	Mechanical Drawing	I, IV, V	1
041-3	Mechanical Drawing	II, III	1
042-3	Machine Drawing	II	2
042-5	Engineering Drawing	III	2
042-6	Engineering Drawing	IV, V	2
043-1	Descriptive Geometry	I, II, III	1
044-2	Mechanism	II	2
044-3	Mechanism	II	2
050-1	Engineering Conference	All	3
050-2	Engineering Conference	All	4
052-1	Thesis	All	4
060-1	Physical Training	All	1
11-1	Surveying	I	1
11-2	Surveying	I	1
11-3	Surveying, Field and Plotting	I	1
11-4	Surveying, Field and Plotting	I	1
11-5	Surveying	I	2
11-6	Surveying, Field and Plotting	I	2

*Curriculum V, second year.

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COURSES OF INSTRUCTION

No.	SUBJECT	Curriculum	Year
11-7	Surveying.....	V	1
12-1	Railroad Surveying.....	I	2
12-2	Railroad Surveying, Field and Plotting..	I	2
12-3	Railroad Engineering.....	I	3
12-4	Railroad Engineering, Field and Plotting..	I	3
13-1	Hydraulics.....	I, II, V	3
13-2	Hydraulic Motors.....	II	3
13-3	Hydraulics.....	III, IV	
14-1	Theory of Structures.....	I	3
14-3	Engineering Structures.....	I	4
14-5	Structural Drawing.....	I	3
14-6	Structural Drawing.....	I	3
14-7	Structural Design.....	I	4
14-8	Structural Design.....	I	4
15-1	Concrete.....	I	4
15-2	Concrete Design.....	I	4
15-3	Concrete.....	II	4
16-1	Materials.....	I, II, V	4
16-2	Testing Materials Laboratory.....	I, V	3
16-3	Foundations.....	I	4
16-4	Geology.....	I	3
17-1	Highways.....	I	4
21-1	Applied Mechanics (Statics).....	All	2
21-2	Applied Mechanics (Kinetics).....	All	2
21-3	Strength of Materials.....	I, II	3
21-4	Strength of Materials.....	III, IV, V	3
22-1	Graphical Analysis.....	II	3
22-2	Machine Design.....	II	3
22-3	Machine Design.....	II	4
22-4	Machine Design.....	II	4
22-5	Mechanisms of Machines.....	II	3
23-1	Heat Engineering.....	II	3
23-3	Heat Engineering.....	I, IV, V	3
23-4	Steam Turbines.....	II	4
23-5	Heat Engineering.....	II	4
23-7	Heat Engineering.....	II	3
24-1	Production Engineering.....	II	1
24-3	Power Plant Equipment.....	II, V	3
24-4	Power Plant Engineering.....	II	4
24-6	Standard Eng. Products and Processes..	II, III, V	4
25-1	Industrial Plants.....	II	4
26-1	Engineering Laboratory.....	II	3
26-2	Engineering Laboratory.....	II	4
26-3	Engineering Laboratory.....	II	4
26-6	Engineering Laboratory.....	II, III	4
30-1	Applied Electricity I.....	I, II, IV	2
30-3	Applied Electricity II.....	I, II, IV, V	2
30-4	Applied Electricity Laboratory.....	I, II	2
32-1	Electrical Engineering I.....	III	1
32-3	Electrical Engineering II.....	III	2
32-4	Electrical Engineering II Laboratory.....	III	2
32-6	Electrical Engineering III Laboratory.....	III	3
32-7	Electrical Engineering III.....	III	3
32-8	Electrical Engineering IV Laboratory.....	III	4
32-9	Electrical Engineering IV.....	III	4
33-1	Electrical Measurements.....	III	3
33-2	Electrical Measurements Laboratory.....	III	3
33-4	Advanced Standardizing Laboratory.....	III	4
34-1	Advanced Engineering V.....	III	4
35-1	Advanced Electricity.....	III	4
40-1	Inorganic Chemistry.....	II, III, V	1
40-1a	Inorganic Chemistry.....	I	3
41-1	Inorganic Chemistry.....	IV	1
41-2	Inorganic Chemistry Laboratory.....	IV	1
42-1	Qualitative Analysis.....	IV	1

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COURSES OF INSTRUCTION

No.	SUBJECT	Curriculum	Year
42-2	Qualitative Analysis Laboratory.....	IV	1
43-1	Quantitative Analysis.....	IV	2
43-2	Quantitative Analysis Laboratory.....	IV	2
44-1	Technical Analysis.....	IV	3
44-2	Technical Analysis Laboratory.....	IV	3
44-3	Technical Analysis.....	IV	3
45-1	Organic Chemistry.....	IV	3
45-2	Organic Chemistry Laboratory.....	IV	3
45-3	Organic Chemistry.....	IV	4
45-4	Organic Chemistry Laboratory.....	IV	4
46-2	Chemical Engineering.....	IV	3
46-3	Chemical Engineering.....	IV	4
47-1	Industrial Chemistry.....	IV	4
47-2	Industrial Chemistry Laboratory.....	IV	4
48-1	Physical Chemistry.....	IV	4
50-1	Industrial Organization.....	I ₂ , II ₂ , V	4, 3
50-2	Industrial Finance.....	I ₂ , II ₂ , V	4, 3
50-6	Business Administration.....	V	4
50-8	Business Administration I.....	Full-time	3
50-9	Business Administration II.....	Full-time	3
50-9a	Business Administration III.....	Full-time	3
50-11	Business Principles I.....	Full-time	2
50-11a	Business Principles II.....	Full-time	2
50-11b	Business Principles III.....	Full-time	2
51-3	Elements of Accounting.....	V	3
51-5	Industrial Problems.....	V	4
51-6	Industrial Problems.....	V	4
51-7	Personnel Administration.....	V	4
52-2	Money and Banking.....	Full-time	2
52-2a	Money and Banking.....	Full-time	2
52-2b	Money and Banking.....	Full-time	2
52-2c	Money and Banking.....	V	3
53-2	Business Law I.....	Full-time	3
53-2a	Business Law II.....	Full-time	3
53-2b	Business Law III.....	Full-time	3
53-3	Business Law.....	V	4
54-2	Economic Geography.....	I ₂ , II ₂ , V	4, 2
54-3	Marketing.....	V	3
54-6	Railroad Problems.....	I ₂ , II ₂	3
54-6a	Railroad Problems.....	I ₂ , II ₂	3
54-7	Foreign Trade.....	I ₂ , II ₂ , V	4, 2
54-8	Transportation.....	V	3
54-9	Salesmanship.....	V	3

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THESES CLASS OF 1924

ALLAN, WILLIAM W. (with R. G. Oakman) Bond between Steel and Concrete	<i>Civil Engineering</i>
ANDERSON, E. ALLEN The Study of the Synthesis of Carbon Disulphide in the Presence of Catalysts	<i>Chemical Engineering</i>
ANDERSON, HENRY G. (with T. E. Barr and W. A. Johnson) The Design of Heating System for an Office Building	<i>Mechanical Engineering</i>
BAADER, ALBERT S. (with J. J. Barry) The Effects of Weather Conditions on High Tension Insulators as shown by Variations in Leakage Current	<i>Electrical Engineering</i>
BAKER, CHARLES G. A Precision Wavemeter	<i>Electrical Engineering</i>
BARBER, DANA H. (with H. R. Colburn and A. G. Hjelmberg) Comparative Tests of Various Fuels and Appliances on a Ford Motor	<i>Mechanical Engineering</i>
BARNEY, KENNETH M. (with R. I. Sawtell) The Investigation of Ferrule Losses in Knife Blade Type Fuses	<i>Electrical Engineering</i>
BARR, THORNTON E. (with H. G. Anderson and W. A. Johnson) The Design of Heating System for an Office Building	<i>Mechanical Engineering</i>
BARRY, JOHN J. (with A. S. Baader) The Effects of Weather Conditions on High Tension Insulators as shown by Variations in Leakage Current	<i>Electrical Engineering</i>
BARTLETT, JAMES H. JR. The Design of a Swing Bridge over Quincy Town River	<i>Civil Engineering</i>
BEARSE, RICHARD C. (with F. W. Smith) The Marketing of Petroleum and its Products	<i>Mechanical Engineering</i>
BEATTIE, ROBERT (with C. C. Coffin and A. E. Whittaker) Survey of Low Pressure Waste Gas System at the Beacon Oil Company, Everett, Mass.	<i>Mechanical Engineering</i>
BENSON, RAYMOND H. The Design of a Purifier	<i>Mechanical Engineering</i>
BESSOM, RALPH E. (with A. R. Brewer and C. W. R. Thomson) A Series of Tests on a Low Pressure Fuel Oil Engine.	<i>Mechanical Engineering</i>
BIGELOW, MAURICE H. (with W. A. Chilson) The Purification of Wool Grease by Hydrogenation	<i>Chemical Engineering</i>

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|---|--------------------------------------|
| <p>BINGHAM, LLOYD A. (with S. W. Lindskog & F. D. Vines)
 Comparative Performance of a Three-Phase Squirrel Cage Induction Motor with Various Connections</p> | <p><i>Electrical Engineering</i></p> |
| <p>BLAKE, HOWARD J. (with A. Brown)
 The Stabilizing of a Viscose Solution</p> | <p><i>Chemical Engineering</i></p> |
| <p>BODEMER, PHILIP E. (with M. A. Carchia)
 Development of Diagrams for Maximum Bending and Direct Stress in Concrete Columns</p> | <p><i>Civil Engineering</i></p> |
| <p>BOUCHARD, GEORGE H.
 The Staining Effect of Metals on Leather</p> | <p><i>Chemical Engineering</i></p> |
| <p>BRADFORD, CECIL B. (with F. A. Shailer and J. J. Somes)
 Test of a Twelve-Inch Pelton Water Wheel</p> | <p><i>Mechanical Engineering</i></p> |
| <p>BRADSHAW, ALFRED O. (with W. F. Malnate)
 The Determination of the Geodetic Position of Station Northeastern (Suffolk County, Massachusetts)</p> | <p><i>Civil Engineering</i></p> |
| <p>BREWER, ARTHUR R. (with R. E. Bessom and C. W. R. Thomson)
 A Series of Tests on a Low Pressure Fuel Oil Engine</p> | <p><i>Mechanical Engineering</i></p> |
| <p>BROOKS, CURTIS C. (with J. S. Brooks)
 Gas Consumption of a Ford Engine</p> | <p><i>Mechanical Engineering</i></p> |
| <p>BROOKS, JOHN S. (with C. C. Brooks)
 Gas Consumption of a Ford Engine</p> | <p><i>Mechanical Engineering</i></p> |
| <p>BROWN, ALFRED (with H. Blake)
 The Stabilizing of a Viscose Solution</p> | <p><i>Chemical Engineering</i></p> |
| <p>CAMPBELL, OSCAR J.
 An Investigation of Gas Water Heaters</p> | <p><i>Mechanical Engineering</i></p> |
| <p>CARCIA, MICHAEL A. (with P. E. Bodemer)
 Development of Diagrams for Maximum Bending and Direct Stress in Concrete Columns</p> | <p><i>Civil Engineering</i></p> |
| <p>CHASE, FRED W. JR. (with J. C. Rundlett)
 A Plan for the Relief of Newburyport's Traffic Problem</p> | <p><i>Civil Engineering</i></p> |
| <p>CHILSON, WARREN A. (with M. H. Bigelow)
 The Purification of Wool Grease by Hydrogenation</p> | <p><i>Chemical Engineering</i></p> |
| <p>COFFIN, CHARLES C. (with R. Beattie and A. E. Whittaker)
 Survey of Low Pressure Waste Gas System at the Beacon Oil Company, Everett, Massachusetts</p> | <p><i>Mechanical Engineering</i></p> |
| <p>COLBURN, HARDY R. (with D. H. Barber and A. G. Hjelmberg)
 Comparative Tests of Various Fuels and Appliances on a Ford Motor</p> | <p><i>Mechanical Engineering</i></p> |

SCHOOL OF ENGINEERING

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|---|-------------------------------|
| COOPER, CHARLES S. (with S. P. Shumavonian)
Column Action on Short Angles | <i>Civil Engineering</i> |
| COOPER, GEORGE I.
The Dyeing of Mixed Cotton and Artificial Silk Hosiery | <i>Chemical Engineering</i> |
| COX, ALLAN N.
The Electrolytic Preparation of Benzaldehyde from Toluene | <i>Chemical Engineering</i> |
| CRAFTS, HAROLD W.
The Reconstruction of the Power System of Holyoke, Massachusetts, based on the Economic and Civic Advantages to the City | <i>Electrical Engineering</i> |
| DICKSON, RICHARD M. (with C. D. Young)
Design and Layout of a Proposed Paper Mill | <i>Mechanical Engineering</i> |
| ELDRIDGE, GORDON B.
An Investigation into the Oxydation of Methane to Carbon Disulphide | <i>Chemical Engineering</i> |
| ELLIOTT, FRANK R. (with A. Ziegler)
The Effect of Ageing on the Microstructure of Duralumin | <i>Chemical Engineering</i> |
| FERGUSON, ARTHUR W. (with G. H. Wetmore)
The Photometry of Illuminants of Varying Color and Intensity | <i>Electrical Engineering</i> |
| FOISIE, G. E.
Design of a Reinforced Concrete Grandstand for the South Common, Nashua, New Hampshire | <i>Civil Engineering</i> |
| FREEMAN, ISADORE W.
The Variations of the Thermal Conductivity of Insulating Materials with the Density at Comparatively Low Temperature | <i>Chemical Engineering</i> |
| FROST, GEORGE (with J. A. Morris)
Transmission Circuits | <i>Electrical Engineering</i> |
| FUNDIN, HJALMAR O. (with G. H. Souther)
The Design of an Automatic Refrigerating Plant for a Small Hospital | <i>Mechanical Engineering</i> |
| GRAY, ARTHUR R. (with A. L. Wilcox)
The Design of an Impounding Reservoir | <i>Civil Engineering</i> |
| HARRINGTON, FRANK C. (with J. H. Mahoney)
The Relative Efficiencies of Tungsten Filament Lamps at Various Voltages Throughout Burning Life | <i>Electrical Engineering</i> |
| HIATT, FRANK C. (with C. M. Lane, Jr.)
The Measurement of Magnetic Leakage in a Direct Current Motor | <i>Electrical Engineering</i> |
| HJELMBERG, ARTHUR G. (with D. H. Barber and H. R. Colburn)
Comparative Tests of Various Fuels and Appliances on a Ford Motor | <i>Mechanical Engineering</i> |
| HOFFMAN, HARRY J.
Thermal Relay Tests and Applications | <i>Electrical Engineering</i> |

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| <p>HUBBY, LEON F. (with E. D. Phinney)
A Test to Determine the Operating Characteristics of a Fynn-Weichsel Alternating Current Motor</p> | <p><i>Electrical Engineering</i></p> |
| <p>HULSMAN, KENNETH G. (with E. W. Kumpel)
Proposed Subway from Everett Station to Everett Square</p> | <p><i>Civil Engineering</i></p> |
| <p>JENKS, DONALD G. (with J. F. Oliva and L. Rabinowitz)
The Preliminary Design and Estimate of a Proposed Hydro-electric Power Project on the North Yakima River, Washington</p> | <p><i>Electrical Engineering</i></p> |
| <p>JOHNSON, WALTER A. (with H. G. Anderson and T. E. Barr)
The Design of Heating System for an Office Building</p> | <p><i>Mechanical Engineering</i></p> |
| <p>KELLY, HAROLD W. (with E. O. Stearns)
Shawmut Branch—Midland Connection—New York, New Haven and Hartford Railroad</p> | <p><i>Civil Engineering</i></p> |
| <p>KENNEY, FRANCIS B. (with C. L. Murphy)
Preliminary Design of a Concrete Mill Building</p> | <p><i>Civil Engineering</i></p> |
| <p>KUMPEL, EDGAR W. (with K. G. Hulsman)
Proposed Subway from Everett Station to Everett Square</p> | <p><i>Civil Engineering</i></p> |
| <p>LANE, CHARLES M. JR. (with F. C. Hiatt)
The Measurement of Magnetic Leakage in a Direct Current Motor</p> | <p><i>Electrical Engineering</i></p> |
| <p>LISSOF, ISRAEL
A Study of the Effect of Iodine as a Catalyst in the Formation of Carbon Tetrachloride from Carbon Desulphide</p> | <p><i>Chemical Engineering</i></p> |
| <p>LATIMER, WILLIAM H.
Design of a Modern Woodworking Plant for Lambert & Latimer</p> | <p><i>Mechanical Engineering</i></p> |
| <p>LAW, WILLIAM H.
Design of a Reinforced Concrete Girder Bridge</p> | <p><i>Civil Engineering</i></p> |
| <p>LEAVITT, CURTIS G. (with J. B. Russell)
Design of Sewage Disposal System for Taunton, Massachusetts</p> | <p><i>Civil Engineering</i></p> |
| <p>LEAVITT, HOWARD L. (with D. F. Tulloch)
Construction and Tests on an Electrolytic Rectifier</p> | <p><i>Electrical Engineering</i></p> |
| <p>LINDSKOG, SIDNEY W. (with F. D. Vines and L. A. Bingham)
Comparative Performance of a Three-Phase Squirrel Cage Induction Motor with Various Connections</p> | <p><i>Electrical Engineering</i></p> |

SCHOOL OF ENGINEERING

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| MAHONEY, JOHN H. (with F. C. Harrington)
The Relative Efficiencies of Tungsten Filament Lamps at Various Voltages Throughout Burning Life | <i>Electrical Engineering</i> |
| MALLOY, JOHN W. (with J. Richard)
The Installation of a Heating System | <i>Mechanical Engineering</i> |
| MALNATE, WILLIAM F. (with A. O. Bradshaw)
The Determination of the Geodetic Position of Station Northeastern (Suffolk County, Massachusetts) | <i>Civil Engineering</i> |
| MARSHALL, ELMER P.
The Solubility of Cellulose Acetate in Chlorinated Hydrocarbons | <i>Chemical Engineering</i> |
| MCELHINNEY, EARLE S. (with R. B. Smith and E. H. Stonequist)
The Investigation of a Centrifugal Pump Directly Connected to a One-Half Horse Power Gasoline Engine | <i>Mechanical Engineering</i> |
| MESSIER, JOSEPH A. (with G. T. Perley)
A New Design of Illumination for St. John's Church, Quincy, Mass. | <i>Electrical Engineering</i> |
| MORRIS, JOSEPH A. (with George Frost)
Transmission Circuits | <i>Electrical Engineering</i> |
| MURPHY, CHARLES L. (with F. B. Kenney)
Preliminary Design of a Concrete Mill Building | <i>Civil Engineering</i> |
| OAKMAN, ROGER G. (with W. W. Allan)
Bond between Steel and Concrete | <i>Civil Engineering</i> |
| OLIVA, JOHN F. (with D. G. Jenks and L. Rabinowitz)
The Preliminary Design and Estimate of a Proposed Hydro-electric Power Project on the North Yakima River, Washington | <i>Civil Engineering</i> |
| PARSONS, WILLIAM N.
A Study of Boston's Freight Transportation Problem and a Plan for its Solution | <i>Civil Engineering</i> |
| PENNIMAN, JOHN R. (with A. M. Thompson)
The New Sewerage System at Hopedale, Massachusetts | <i>Civil Engineering</i> |
| PERLEY, GEORGE T. (with J. A. Messier)
A New Design of Illumination for St. John's Church, Quincy, Mass. | <i>Electrical Engineering</i> |
| PHINNEY, EDWARD D. (with L. F. Hubby)
A Test to Determine the Operating Characteristics of a Fynn-Weichsel Alternating Current Motor | <i>Electrical Engineering</i> |
| QUILTY, RALPH G.
A Determination of the Change in Some of the Important Physical Properties of a "High Run" Mineral Oil due to Continuous Heating | <i>Chemical Engineering</i> |

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| <p>RABINOWITZ, LOUIS (with D. G. Jenks and J. F. Oliva)
The Preliminary Design and Estimate of a Proposed Hydro-electric Power Project on the North Yakima River, Washington</p> | <p><i>Electrical Engineering</i></p> |
| <p>RICHARD, IRENEE T. (with J. W. Malloy)
The Installation of a Heating System</p> | <p><i>Mechanical Engineering</i></p> |
| <p>RUNDLETT, JOHN C. (with F. W. Chase, Jr.)
A Plan for the Relief of Newburyport's Traffic Problem</p> | <p><i>Civil Engineering</i></p> |
| <p>RUSSELL, JOHN B. (with C. G. Leavitt)
Design of Sewage Disposal System for Taunton, Mass.</p> | <p><i>Civil Engineering</i></p> |
| <p>SANBORN, FRANK D. (with G. H. Sanborn)
Design of an Internal Differential Speed Reducer</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SANBORN, GEORGE H. (with F. D. Sanborn);
Design of an Internal Differential Speed Reducer</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SAWTELL, RAYMOND I. (with K. M. Barney)
The Investigation of Ferrule Losses in Knife Blade Type Fuses</p> | <p><i>Electrical Engineering</i></p> |
| <p>SCHALLER, IRVING R.
The Design of a Machine for Bump Testing Incandescent Lamps</p> | <p><i>Electrical Engineering</i></p> |
| <p>SHAILER, FISK A. (with C. B. Bradford and J. J. Somes)
Test of a Twelve-Inch Pelton Water Wheel</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SHUMAVONIAN, SORUN P. (with C. S. Cooper)
Column Action on Short Angles</p> | <p><i>Civil Engineering</i></p> |
| <p>SMITH, FARNHAM W. (with R. C. Bearse)
The Marketing of Petroleum and its Products</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SMITH, ROBERT B. (with E. S. McElhinney and E. H. Stonequist)
The Investigation of a Centrifugal Pump Directly Connected to a One-Half Horse Power Gasoline Engine</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SOMES, JOHN J. (with C. B. Bradford and F. A. Shailer)
Test of a Twelve-Inch Pelton Water Wheel</p> | <p><i>Mechanical Engineering</i></p> |
| <p>SOUTHER, GEORGE H. (with H. O. Fundin)
The Design of an Automatic Refrigerating Plant for a Small Hospital</p> | <p><i>Mechanical Engineering</i></p> |
| <p>STANTON, FRED P. JR.
A Study of the Effects of Wattage and Discoloration on the Lumen Maintenance of Incandescent Lamps</p> | <p><i>Electrical Engineering</i></p> |
| <p>STEARNS, ELTON O. (with H. W. Kelly)
Shawmut Branch—Midland Division Connection—New York, New Haven and Hartford Railroad</p> | <p><i>Civil Engineering</i></p> |

SCHOOL OF ENGINEERING

- STONEQUIST, EDWARD H. (with R. B. Smith & E. S. McElhinney) *Mechanical Engineering*
The Investigation of a Centrifugal Pump Directly Connected to a One-Half Horse Power Gasoline Engine
- STOTZ, HERMAN C. *Civil Engineering*
A Study for a Proposed Subway
- TAYLOR, ROBERT N. *Chemical Engineering*
A Rapid Test for Determining the Age Properties of Rubber Goods
- THOMPSON, ALAN M. (with J. R. Penniman) *Civil Engineering*
The New Sewerage System at Hopedale, Massachusetts
- THOMSON, CLAUDE W. R. (with R. E. Bessom and A. R. Brewer) *Mechanical Engineering*
A Series of Tests on a Low Pressure Fuel Oil Engine
- TULLOCK, DOUGLASS F. (with H. L. Leavitt) *Electrical Engineering*
Construction and Tests on an Electrolytic Rectifier
- ULMER, DONALD J. *Electrical Engineering*
Principles of Transformer Design and Operation
- VINES, FREDERICK D. (with S. W. Lindskog & L. A. Bingham) *Electrical Engineering*
Comparative Performance of a Three-Phase Squirrel Cage Induction Motor with Various Connections
- WADE, EDWARD A. *Electrical Engineering*
A Method of Power Conservation for the Worcester Electric Light Company
- WALKER, LAWRENCE D. *Chemical Engineering*
The Water Dispersion of Coagulated Rubber Latex
- WESTON, PHILIP O. *Electrical Engineering*
The Study of the Vacuum Tube and its Characteristics
- WETMORE, GEORGE H. (with A. W. Ferguson) *Electrical Engineering*
The Photometry of Illuminants of Varying Color and Intensity
- WHITTAKER, ALBERT E. (with R. Beattie & C. C. Coffin) *Mechanical Engineering*
Survey of Low Pressure Waste Gas System at the Beacon Oil Company, Everett, Massachusetts
- WILCOX, ARTHUR L. (with A. R. Gray) *Civil Engineering*
The Design of an Impounding Reservoir
- WRIGHT, MAURICE H. *Chemical Engineering*
The Dehydration and Hardening of Rosin
- YOUNG, CLAUDE D. (with R. M. Dickson) *Mechanical Engineering*
- ZIEGRA, ALBERT G. (with F. R. Elliott) *Chemical Engineering*
The Effect of Ageing on the Microstructure of Duralumin

NORTHEASTERN UNIVERSITY

REGISTRY OF STUDENTS, 1925-1926

NAME	DEPT.	YEAR	HOME ADDRESS
Abbott, Charles F.	Ch.E.	1928	<i>Hingham</i>
Abramovitz, Julius	C.E.	1925	<i>Malden</i>
Abrams, William J. Jr.	C.E.	1928	<i>New Bedford</i>
Adams, Raymond T.	C.E.	1928	<i>Quincy</i>
Adler, Webster P.	Ch.E.	1928	<i>Abington</i>
Alcock, Thomas R.	C.E.	1928	<i>Waltham</i>
Alden, Edgar O.	E.E.	1926	<i>East Saugus</i>
Alexander, Charles E.	E.E.	1928	<i>South Orrington, Me.</i>
Allen, George M.	E.E.	1927	<i>West Springfield</i>
Allen, Maurice F.	E.E.	1928	<i>Malden</i>
Allen, Northrup B.	C.E.	1928	<i>Danvers</i>
Allen, Whiteman E.	E.E.	1928	<i>Frammingham</i>
Ambrose, Carl	E.E.	1928	<i>Norwood</i>
Ames, Charles F. Jr.	E.E.	1928	<i>Fort Fairfield, Me.</i>
Anderson, Henry R.	C.E.	1927	<i>Shelton, Conn.</i>
Andrelsky, John F.	E.E.	1928	<i>Stafford Springs, Conn.</i>
Anthony, Sidney S.	C.E.	1926	<i>Manchester, N. H.</i>
Arthur, John C.	E.E.	1928	<i>Salem</i>
Atkins, George R.	E.E.	1928	<i>Poultney, Vt.</i>
Atkinson, Robert T.	E.E.	1928	<i>Melrose</i>
Auger, Lawrence A.	M.E.	1927	<i>Lynn</i>
Averill, Eugene A.	Ch.E.	1928	<i>Milford</i>
Avery, Lloyd D.	E.E.	1926	<i>Webster</i>
Ayer, Raymond B.	E.E.	1925	<i>Plainville</i>
Ayles, Vernon M.	C.E.	1925	<i>Newton Highlands</i>
Bacon, Dana H.	E.E.	1926	<i>East Bridgewater</i>
Bacon, Robert E.	E.E.	1925	<i>Nobscot</i>
Badger, William L.	Ch.E.	1926	<i>Lynn</i>
Bailey, Dow M.	Ch.E.	1928	<i>Rochester, Vt.</i>
Bailey, Walter C.	C.E.	1926	<i>Lynn</i>
Bakalar, Arthur B.	Ch.E.	1926	<i>Chelsea</i>
Baker, Arnold B.	E.E.	1928	<i>Boston</i>
Baker, Charles L.	M.E.	1928	<i>South Orange, N. J.</i>
Baker, Henry A.	M.E.	1927	<i>Whitman</i>
Ballard, Burton L.	C.E.	1928	<i>Boston</i>
Bamber, John E.	C.E.	1928	<i>Fall River</i>
Banks, Morris	Ch.E.	1927	<i>Komaiach, Kovenski, Russia</i>
Banwell, Arthur W.	M.E.	1925	<i>Chelsea</i>
Baratta, Edmund A.	C.E.	1925	<i>Everett</i>
Barker, Edward H.	E.E.	1925	<i>East Bridgewater</i>
Barnatt, Stanley T.	E.E.	1928	<i>Millville</i>
Barnes, Julius L.	M.E.	1926	<i>Allston</i>
Barnett, Stewart K.	C.E.	1925	<i>East Douglas</i>
Baroudi, Kamal	E.E.	1928	<i>Cambridge</i>
Barrett, Robert E.	E.E.	1927	<i>Readville</i>
Barrows, Bertram W.	Ch.E.	1928	<i>Quincy</i>
Bartlett, George W.	Ch.E.	1928	<i>Newburyport</i>
Bartlett, Lothrop B.	Ch.E.	1925	<i>East Walpole</i>
Barton, Kenneth L.	C.E.	1925	<i>Meriden, N. H.</i>
Bates, Allen W.	E.E.	1926	<i>Cohasset</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Bates, Lou R. Jr.	Ch.E.	1928	East Somerville
Bates, Thomas E.	E.E.	1928	West Medford
Baxter, Herbert C.	M.E.	1928	Sharon
Beach, Stuart A.	E.E.	1928	West Acton
Beal, William H.	M.E.	1928	Jamaica Plain
Bearse, Edwin H.	E.E.	1928	Providence, R. I.
Beedle, Robert H.	E.E.	1928	Allston
Bemis, Norman C.	M.E.	1927	Gleasondale
Bemis, Watson A.	Ch.E.	1928	Beachmont
Bender, Albert V.	E.E.	1925	Arlington
Bengston, Nils B.	M.E.	1927	Everett
Benjamin, George C.	C.E.	1926	Melrose Highlands
Bennett, Leon S.	E.E.	1928	South Weymouth
Bennett, William S.	E.E.	1928	Boston
Benoit, Everett C.	E.E.	1926	Pawtucket, R. I.
Benson, John D.	C.E.	1927	South Boston
Bergmann, John S.	E.E.	1928	Easthampton
Bernard, Francis W.	E.E.	1928	Hyannis
Bernklow, Fred A.	E.E.	1928	Thompson, Conn.
Berry, George F.	C.E.	1927	Baldwinville
Berry, James F.	C.E.	1926	Boston
Bertini, George E.	C.E.	1925	Everett
Bessey, Carlton E.	E.E.	1927	Somerville
Bickford, Chaloner L.	E.E.	1928	New Hampton, N. H.
Birkmaier, Waldo B.	C.E.	1927	Waltham
Birnie, William D. Jr.	E.E.	1928	Watertown
Bishop, George E.	C.E.	1927	Newburyport
Bishop, Verne O.	M.E.	1928	Boston
Bissett, John E.	E.E.	1925	Quincy
Black, Charles H.	Ch.E.	1928	South Hanson
Blacker, Fred J.	M.E.	1926	Somerville
Blackstone, Harry W.	E.E.	1928	Allston
Blair, Richard H.	Ch.E.	1928	Waltham
Blake, Clarence D.	E.E.	1926	Dorchester
Blatchford, James W.	Ch.E.	1927	Gloucester
Blatchford, Lawrence H.	M.E.	1926	Framingham
Blessington, John J.	C.E.	1928	Lowell
Blodgett, Newton K.	E.E.	1925	Colebrook, N. H.
Blood, Charles E.	M.E.	1927	Taunton
Bloom, Maurice	C.E.	1926	Somerville
Blumer, Edwin F.	M.E.	1925	Brookfield
Blumberg, Carlton J.	Ch.E.	1927	Gloucester
Blunda, Ignazio	C.E.	1926	East Boston
Boardman, George A.	E.E.	1928	Taunton
Boccaccio, Joseph	E.E.	1928	Holley, N. Y.
Bockstrom, Carl W.	Ch.E.	1927	Somerville
Boden, Arthur T.	E.E.	1925	Beverly
Bolton, John H.	Ch.E.	1928	Hingham
Bonitto, Vincent H.	C.E.	1928	Boston
Bosher, William A.	Ch.E.	1928	Boston
Bosworth, Warren H.	Adm.E.	1928	North Attleboro
Botsford, Franklin	C.E.	1927	Penn Yan, N. Y.
Boulter, Clarence F.	C.E.	1928	New Boston, N. H.

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Bousfield, Weston A.	M.E.	1927	Wellesley
Bowen, Ernest C.	Ch.E.	1928	Medford
Bowers, Moses L.	C.E.	1925	East Boston
Bowie, John H.	C.E.	1925	East Milton
Boyd, Ronald A.	E.E.	1925	Taunton
Boyden, Elwin C.	E.E.	1927	South Walpole
Bradbury, Lauris J.	E.E.	1928	Old Town, Me.
Bradbury, Rolfe C.	Ch.E.	1925	Cliftondale
Bradford, John D.	C.E.	1927	Lynn
Braica, Anthony A.	C.E.	1926	Springfield
Bray, Wesley R.	C.E.	1925	Torrington, Conn.
Breive, Augustine M.	E.E.	1927	Waterbury, Conn.
Bretschneider, Max	E.E.	1927	Danielson, Conn.
Briggs, Leon R.	C.E.	1926	Adams
Britt, Francis V.	C.E.	1926	Cambridge
Broadley, William A.	E.E.	1925	East Walpole
Brodrick, Newton T.	M.E.	1928	Newton
Brolin, Walter B.	E.E.	1927	Proctor, Vt.
Bronson, Donald I.	E.E.	1928	Winsted, Conn.
Brooks, Winstone H.	C.E.	1928	Sanford, Me.
Brown, David A.	C.E.	1927	East Lynn
Brown, George P.	Ch.E.	1926	Plymouth
Brown, Horace S.	E.E.	1928	Bangor, Me.
Brown, Kenneth N.	C.E.	1928	Boston
Brown, Lloyd M.	E.E.	1928	Smyrna Mills, Me.
Brown, Louis C.	Ch.E.	1927	Livermore Falls, Me.
Brown, Willard B.	C.E.	1927	Grafton
Browning, Chester E.	C.E.	1928	Providence, R. I.
Bruce, Herbert A.	C.E.	1925	Waverley
Brustin, Nathan	C.E.	1927	Malden
Bryant, Stanley W.	C.E.	1927	Allston
Buck, Harold A.	C.E.	1925	Springfield
Buckingham, Merritt H.	E.E.	1928	Elmwood
Buckley, Arthur J.	E.E.	1927	Salem
Bunker, Page S.	M.E.	1928	Boston
Buntschuh, Henry C.	C.E.	1927	Boston
Burke, George M.	M.E.	1926	Arlington
Burke, James L.	E.E.	1926	Everett
Burkett, Frank E.	C.E.	1928	Camden, Me.
Burrill, Harold A.	M.E.	1927	Swampscott
Bury, Albert W.	C.E.	1928	Providence, R. I.
Butler, Nelson R.	M.E.	1928	Melvin Village, N. H.
Caddy, George K.	Ch.E.	1928	Cliftondale
Caffrey, Richard D.	E.E.	1927	Rockport
Cain, Charles C.	C.E.	1928	Medfield
Call, Chester W.	E.E.	1927	Wollaston
Call, Irving H.	C.E.	1927	Wollaston
Callahan, Henry F.	E.E.	1926	Salem
Camelio, John F.	E.E.	1927	Walpole
Campaminosi, John L.	E.E.	1927	E. Glastonbury, Conn.
Campbell, Cedric C.	E.E.	1926	Medford
Campbell, David R.	M.E.	1928	Boston
Cantley, James V.	E.E.	1927	Beverly

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Carlson, Arthur E.	E.E.	1927	Worcester
Carlson, Elmer T.	E.E.	1925	Sandwich
Carlton, F. Tyler	C.E.	1926	Andover
Carman, Willard A.	E.E.	1926	Ayer
Carpenter, C. P.	E.E.	1927	Sullivan, Maine
Carpenter, Donald W.	E.E.	1927	West Roxbury
Carpenter, Emerson	E.E.	1927	Marlboro
Carr, Elton G.	E.E.	1927	Beverly
Carr, Russell S.	C.E.	1928	Beverly
Carrie, John	E.E.	1926	Boston
Carroll, John T.	M.E.	1926	Watertown
Carroll, Martin P.	E.E.	1928	New Milford, Conn.
Carroll, William H.	M.E.	1927	Hanover
Carswell, Archie A.	C.E.	1925	Beverly Farms
Carter, John C.	E.E.	1925	Washington, D. C.
Carter, Thomas R.	Ch.E.	1928	Saratoga, N. Y.
Case, Robert W.	M.E.	1927	Unionville, Conn.
Chalmers, Archibald C.	E.E.	1928	Brockton
Chapin, Robert C.	C.E.	1927	Cambridge
Chapin, William S.	C.E.	1927	Chicopee
Chapman, Stanley C.	M.E.	1928	Medford
Cheney, Frank L.	C.E.	1927	Westwood
Chipes, Anthony J.	M.E.	1928	South Boston
Christenson, Clifton E.	E.E.	1928	Gloucester
Christenson, Edward R.	C.E.	1925	Lee
Chudoba, John W.	E.E.	1928	Glastonbury, Conn.
Churbuck, Harold L.	Adm.E.	1928	Bridgewater
Chute, Dudley H.	E.E.	1928	Lexington
Clark, Clifford A.	E.E.	1928	Northampton
Clark, John L.	E.E.	1927	Waltham
Clark, Edward A.	C.E.	1926	Northampton
Clark, John W.	M.E.	1927	Framingham
Clark, Lawrence E.	Adm.E.	1928	Concord
Clark, Raymond F.	E.E.	1925	No. Abington
Clark, Wayne E.	Adm.E.	1928	Natick
Clarke, Edwin L.	E.E.	1928	Medford
Clarke, Lawrence R.	Ch.E.	1927	Cambridge
Clayman, Bernard	E.E.	1927	Dorchester
Clerke, Philip N.	E.E.	1925	Lynn
Cobb, Lewis E.	E.E.	1926	West Medford
Cochrane, Earle S.	C.E.	1926	Cambridge
Cohen, Morris	C.E.	1925	Dorchester
Collicutt, Cecil W.	E.E.	1928	Alfred, Maine
Collins, Bertram J.	C.E.	1928	Dorchester
Collins, Maurice B.	M.E.	1928	Newburyport
Collins, William J.	E.E.	1926	Cambridge
Colomy, Charles N.	M.E.	1928	Rockland, Maine
Commeau, Lawrence	E.E.	1928	Plymouth
Como, Edward W.	E.E.	1928	Gloucester
Compton, Francis P.	E.E.	1928	Apponaug, R. I.
Comstock, Alvin F.	M.E.	1927	Deven, Conn.
Connell, John A.	E.E.	1928	Roslindale
Connor, Wilbert H.	C.E.	1925	Orient Heights

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Conquest, Charles W.	M.E.	1928	<i>Fairhaven</i>
Cook, Charles W.	Ch.E.	1927	<i>Saugus</i>
Cook, Herbert C.	C.E.	1928	<i>Providence, R. I.</i>
Cooke, Joseph W.	E.E.	1925	<i>Goshen, Conn.</i>
Coombs, Raymond F.	C.E.	1928	<i>Peabody</i>
Copans, William J.	E.E.	1927	<i>Lynn</i>
Corliss, Theodore A.	M.E.	1925	<i>Somerville</i>
Cornwell, Emdon C.	E.E.	1928	<i>Gardner</i>
Corsano, Edmund C.	E.E.	1928	<i>East Boston</i>
Corsano, Nicholas	M.E.	1926	<i>East Boston</i>
Corvin, William B.	E.E.	1926	<i>Dorchester</i>
Corwin, Leonard B.	M.E.	1928	<i>New Haven, Conn.</i>
Costa, Joseph A.	C.E.	1928	<i>Melrose</i>
Cotter, James B.	M.E.	1927	<i>Stoughton</i>
Courtney, Henry G.	E.E.	1928	<i>Dorchester</i>
Cowley, Charles J.	E.E.	1928	<i>Roslindale</i>
Crabb, Charles R.	E.E.	1928	<i>Dorchester</i>
Cragin, Donald G.	M.E.	1925	<i>Framingham</i>
Cragin, Henry P.	M.E.	1928	<i>East Boston</i>
Cramb, Lester P.	E.E.	1925	<i>Melrose</i>
Crane, Harold S.	E.E.	1928	<i>Rockland</i>
Cranouski, William J.	C.E.	1927	<i>Poquonock, Conn.</i>
Crawford, John L.	M.E.	1927	<i>Danvers</i>
Crockett, Edgar B.	E.E.	1928	<i>Rockland, Maine</i>
Crockett, Elton G.	E.E.	1925	<i>Plainville</i>
Crooker, Earl B.	E.E.	1928	<i>Medfield</i>
Crosby, Elmer K.	M.E.	1927	<i>Somerville</i>
Cross, Robert C.	M.E.	1925	<i>Westfield</i>
Cuff, William R.	M.E.	1928	<i>So. Braintree</i>
Cullivan, Russell E.	E.E.	1927	<i>Boston</i>
Cunningham, James	M.E.	1927	<i>Salem</i>
Curtin, Carl L.	Adm.E.	1928	<i>Tyringham</i>
Cushing, George B., Jr.	M.E.	1927	<i>Duxbury</i>
Cushing, Samuel A.	E.E.	1925	<i>Beverly</i>
Cutts, Howard H.	Ch.E.	1928	<i>Roxbury</i>
Dahlquist, John W.	M.E.	1927	<i>Dorchester</i>
Dall, John A.	M.E.	1928	<i>Roslindale</i>
D'Amore, Joseph E.	C.E.	1927	<i>East Boston</i>
Daniels, James W.	M.E.	1925	<i>Brookline</i>
Davey, Frank H.	E.E.	1925	<i>New London, Conn.</i>
Davidson, Edwin F.	Ch.E.	1925	<i>Atlantic</i>
Davis, Edward L., Jr.	C.E.	1925	<i>Swampscott</i>
Davis, Herbert G.	C.E.	1928	<i>Braintree</i>
Davis, Leon P.	C.E.	1925	<i>Alton Bay, N. H.</i>
Davis, Peirce	E.E.	1927	<i>Taunton</i>
Davis, Walter G.	M.E.	1926	<i>Swampscott</i>
Davis, Warren M.	Ch.E.	1928	<i>Swampscott</i>
Davis, Winthrop M.	M.E.	1927	<i>Bridgeport, Conn.</i>
Day, Charles D.	M.E.	1926	<i>Taunton</i>
Day, Marion W.	C.E.	1926	<i>Randolph, Vt.</i>
Day, Williard H.	C.E.	1927	<i>Randolph, Vt.</i>
Deacon, Malcolm E.	M.E.	1928	<i>Becket</i>
DeBiasi, Charles P.	C.E.	1926	<i>Noank, Conn.</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
DeLaura, Edward	E.E.	1928	Holley, N. Y.
DeMeritt, John W.	E.E.	1928	Exeter, N. H.
Dennis, Frank L.	E.E.	1927	Peabody
Dennis, Ralph L.	M.E.	1928	Swampscott
Denoyers, Emil J.	M.E.	1928	North Adams
Deschamps, Roland H.	M.E.	1927	Salem
Deschamps, Paul F.	E.E.	1928	Framingham
DesIsles, Harold L.	C.E.	1927	Springfield
De Stefano, Michael	C.E.	1928	East Boston
DeVarney, Carroll F.	M.E.	1927	Ansonia, Conn.
DiBiasi, Dominic	E.E.	1928	Boston
DiCicco, Ruzziero	M.E.	1926	Concord
Dickerman, Ralph T.	C.E.	1925	Taunton
Dietsch, Adolph J.	E.E.	1927	Westwood
Dietsch, Otto A.	E.E.	1928	Dorchester
Dill, E. Arnold	C.E.	1926	Raynham Center
Dingman, Frederick E.	C.E.	1927	Wrentham
Dirks, Harold F.	M.E.	1927	Danvers
D'Italia, Raymond	E.E.	1925	Medford Hillside
Doane, Reginald F.	C.E.	1928	Athol
Dodge, Harold C.	E.E.	1928	Bar Harbor, Maine
Dogan, Charles C., Jr.	E.E.	1928	Norfolk, Va.
Dolan, Laurence E.	E.E.	1925	Middlebury, Vt.
Donick, Frank C.	M.E.	1926	Boston
Donnelly, James L.	E.E.	1927	Boston
Doucette, Thomas E.	E.E.	1927	Melrose
Douglass, Robert G.	E.E.	1928	Wollaston
Downing, John J.	M.E.	1928	Taunton
Downs, Bernard I.	M.E.	1927	Forestville, Conn.
Downs, Clarence R.	E.E.	1927	Foxboro
Doyle, William L.	E.E.	1928	Boston
Dubinsky, Max J.	C.E.	1928	Mattapan
Duemmling, Frank C.	Ch.E.	1928	Boston
Duffy, George R., Jr.	Ch.E.	1928	Medford
Dugan, Kenneth M.	Ch.E.	1928	Boston
Duncan, Harold E.	E.E.	1928	Winthrop
Dunlap, William F.	C.E.	1925	Plymouth
Dunn, Guilford T.	E.E.	1928	Fitchburg
Dunn, Theodore F. W.	M.E.	1928	Medford
Durnier, Ole	Ch.E.	1928	Ashland
Dutton, Frank B.	Ch.E.	1928	No. Beverly
Duwart, Roger F.	C.E.	1928	Gloucester
Dyer, Charles MacKenzie	M.E.	1928	Aurburndale
Dyke, Milton F.	C.E.	1928	Somerville
Edson, Carl R.	E.E.	1926	Elmwood
Edwards, Carl W.	E.E.	1925	Redendo Beach, Cal.
Egan, Joseph P.	C.E.	1928	Ansonia, Conn.
Eldridge, Frederick B.	E.E.	1928	Johnstown, N. Y.
Eldridge, Raymond E.	E.E.	1926	Ashland
Eldridge, Russell I.	E.E.	1927	Concord
Ellard, Walter B.	E.E.	1927	Medford
Ellingwood, Mallard E.	E.E.	1928	Brockton
Elliott, Donald C.	M.E.	1926	Danvers

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Elliott, Homer B.	E.E.	1927	<i>Needham</i>
Ellis, Stanley W.	E.E.	1928	<i>Lowell</i>
Ellms, Gordon L.	C.E.	1927	<i>New Britain, Conn.</i>
Elwell, Maynard	E.E.	1926	<i>Dorchester</i>
Emerson, Wallace N.	C.E.	1928	<i>Thetford, Vt.</i>
Emery, Carl B.	C.E.	1925	<i>Portland, Maine</i>
Engdahl, Lawrence K.	C.E.	1927	<i>Roslindale</i>
Enstam, Paul	E.E.	1927	<i>New Britain, Conn.</i>
Erickson, Robert	M.E.	1926	<i>Fitchburg</i>
Ericson, Frederic O.	M.E.	1925	<i>Beverly</i>
Everts, William J.	E.E.	1927	<i>New London, Conn.</i>
Ewan, Arnold W.	E.E.	1928	<i>Eastport, Maine</i>
Ewell, Frederick A.	C.E.	1925	<i>Medford</i>
Faber, Roger N.	E.E.	1927	<i>Weston</i>
Fairbrother, Russell S.	Ch.E.	1925	<i>Boston</i>
Falla, George B.	M.E.	1928	<i>North Andover</i>
Farmer, James W.	E.E.	1928	<i>Watertown</i>
Farr, Everett E.	E.E.	1928	<i>Waitsfield, Vt.</i>
Farr, Norman S.	E.E.	1928	<i>Groveland</i>
Farrell, Thomas J.	Ch.E.	1928	<i>Melrose</i>
Fay, J. Ernest	E.E.	1928	<i>Waltham</i>
Fellows, Frank M., Jr.	Ch.E.	1928	<i>Newton</i>
Ferguson, Joseph A.	C.E.	1927	<i>Boston</i>
Ferrer, Jose F.	M.E.	1927	<i>Cuba</i>
Ferris, James E.	Ch.F.	1926	<i>Mattapan</i>
Ferrugia, Anthony	E.E.	1928	<i>Fredonia, N. Y.</i>
Fisher, John H.	E.E.	1926	<i>Quincy</i>
Fisher, Roland H.	M.E.	1928	<i>Fitchburg</i>
Fitts, Charles A.	C.E.	1927	<i>North Amherst</i>
Fitts, Leland C.	C.E.	1927	<i>Hampstead, N. H.</i>
Fitzgerald, James J.	E.E.	1928	<i>Dorchester</i>
Fitzhenry, Robert E.	E.E.	1927	<i>Walpole</i>
Flanders, Joseph C.	E.E.	1928	<i>Lancaster, N. Y.</i>
Flanders, William J.	Adm.E.	1928	<i>Allston</i>
Flett, David E.	C.E.	1927	<i>Somerville</i>
Fleurriel, Paul M.	M.E.	1928	<i>Swampscott</i>
Flinn, Edwin S.	Ch.E.	1928	<i>West Roxbury</i>
Flynn, Roland W.	M.E.	1926	<i>Concord</i>
Flynn, Stephen J.	E.E.	1925	<i>Woburn</i>
Folsom, Lawrence	Ch.E.	1927	<i>Greenville, Maine</i>
Foote, Earl	E.E.	1927	<i>Weston</i>
Ford, James B.	E.E.	1925	<i>Melrose</i>
Ford, Lysle N.	E.E.	1928	<i>Brockton</i>
Forsberg, Hilbert T.	E.E.	1928	<i>Brockton</i>
Forster, Carl P.	M.E.	1928	<i>Fall River</i>
Foss, Walter T.	E.E.	1926	<i>Marblehead</i>
Foster, Alton H.	E.E.	1927	<i>Norton</i>
Foster, Harry B.	E.E.	1925	<i>Medford</i>
Foster, James D.	E.E.	1927	<i>Winthrop</i>
Foster, Robert S.	C.E.	1927	<i>Beverly</i>
Fotens, John M.	Ch.E.	1927	<i>East Lynn</i>
Fowler, Earl W.	E.E.	1925	<i>Westfield</i>
Foye, Allen B.	Ch.E.	1927	<i>Westdale</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Frawley, George H.	E.E.	1928	<i>Bridgewater</i>
Frazier, Stuart D.	Ch.E.	1925	<i>Salem</i>
Frederick, Paul R.	M.E.	1927	<i>Dorchester</i>
Freeland, Clifford M.	E.E.	1927	<i>Holden</i>
French, Murvin A.	E.E.	1925	<i>Framingham</i>
French, Robert M.	E.E.	1928	<i>Solon, Maine</i>
Frey, Edward J.	M.E.	1928	<i>Windsor Locks, Conn.</i>
Frisbie, Percy C.	E.E.	1928	<i>Dorchester</i>
Frost, Daniel C.	C.E.	1926	<i>Newburyport</i>
Frye, Harold B.	C.E.	1925	<i>Boston</i>
Fullam, William F.	E.E.	1928	<i>North Brookfield</i>
Fuller, John, Jr.	Ch.E.	1925	<i>Atlantic</i>
Gaffney, William E.	Ch.E.	1927	<i>Wareham</i>
Gale, F. Gardiner	E.E.	1926	<i>Concord Junction</i>
Gamble, Harold G.	C.E.	1926	<i>Dorchester</i>
Gannon, John J.	E.E.	1928	<i>Clinton</i>
Gaulin, Victor S.	E.E.	1928	<i>Lowell</i>
Gebhardt, Louis F.	M.E.	1926	<i>Jamaica Plain</i>
Gedney, Gaylord W.	M.E.	1928	<i>East Lynn</i>
Geissler, Henry	E.E.	1928	<i>Sharon</i>
Ghen, Russell C.	E.E.	1926	<i>Melrose</i>
Gibbs, Louis	Ch.E.	1928	<i>Boston</i>
Giblin, Thomas G.	C.E.	1927	<i>Roxbury</i>
Gifford, Clarence H.	M.E.	1926	<i>South Westport</i>
Gilchrist, Arthur B.	M.E.	1927	<i>Foxboro</i>
Gilman, Frank B.	M.E.	1928	<i>Bethel, Vt.</i>
Gilman, Soli	C.E.	1928	<i>Peabody</i>
Gilmore, Ross A.	C.E.	1927	<i>Quincy</i>
Glen, Crawford A.	E.E.	1927	<i>Taunton</i>
Glickman, Harry	M.E.	1927	<i>West Medway</i>
Glover, Leland B.	E.E.	1928	<i>Winthrop</i>
Glowacki, Joseph	Ch.E.	1927	<i>Andover</i>
Goddin, Eugene B.	E.E.	1928	<i>West Bridgewater</i>
Goldberg, Edward M.	Ch.E.	1927	<i>Roxbury</i>
Goldstone, Louis A.	E.E.	1927	<i>Hartford, Conn.</i>
Goodman, David M.	Adm.E.	1928	<i>New Bedford</i>
Gordon, Nathan B.	E.E.	1928	<i>Bristol, Conn.</i>
Gould, David W.	E.E.	1928	<i>South Boston</i>
Gourley, Evans F.	E.E.	1927	<i>Melrose</i>
Gowen, Alton B.	M.E.	1927	<i>Medford</i>
Grabau, Francis W.	E.E.	1926	<i>Hyde Park</i>
Graf, Frederick J.	M.E.	1926	<i>Worcester</i>
Gragnano, Joseph A.	C.E.	1928	<i>New York City, N. Y.</i>
Graham, Frank E.	Ch.E.	1926	<i>Boston</i>
Grant, Charles W.	M.E.	1926	<i>West Roxbury</i>
Gray, Harry G.	C.E.	1928	<i>Beverly</i>
Gray, Walter M.	E.E.	1928	<i>Peabody</i>
Gray, Wilbur S.	E.E.	1925	<i>Salem</i>
Green, Leo J.	Ch.E.	1928	<i>Brookline</i>
Greene, James H.		1928	<i>Medford</i>
Gregg, Earl F.	E.E.	1926	<i>Mars Hill, Me.</i>
Grevis, John	Ch.E.	1928	<i>South Boston</i>
Grimes, Edgar S.	E.E.	1928	<i>Lawrence</i>

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Grover, Laurence W.	C.E.	1927	Halifax
Guard, George G.	C.E.	1928	New Bedford
Guerra, Domenic R.	C.E.	1928	East Boston
Gunnison, Donald A.	M.E.	1928	Cambridge
Gurney, Charles S.	M.E.	1928	Wareham
Hackett, James D.	E.E.	1925	Watertown
Hadlock, Calvin F.	E.E.	1927	Mansfield
Haendler, Anton T.	E.E.	1926	East Milton
Hagar, Arthur A.	E.E.	1928	Kennebunkport, Me.
Hagelston, Herbert F.	Ch.E.	1927	Boston
Haigis, Russell J.	Ch.E.	1927	New Britain, Conn.
Hakesley, Edward R.	E.E.	1927	Somerville
Hale, Walter L., Jr.	E.E.	1928	Wilmington
Hall, Lyman D.	M.E.	1928	Melrose
Hamilton, Carroll L.	E.E.	1925	Portland, Me.
Hamilton, Willard P.	E.E.	1928	Caribou, Me.
Hammond, Herman B.	C.E.	1928	Holbrook
Hamparian, Hampar B.	C.E.	1926	Boston
Hampe, Fritz F.	C.E.	1926	Jamaica Plain
Hanlon, William J.	E.E.	1928	Medway
Hannable, Daniel W.	M.E.	1925	Beverly Farms
Hanscom, Clinton F.	E.E.	1928	East Walpole
Hanson, Erling A.	C.E.	1926	Boston
Harding, Lawrence M.	M.E.	1928	Folly Island, S. C.
Hargen, Daniel M.	C.E.	1928	Enfield, N. H.
Hargreaves, William	E.E.	1928	Newton
Harmaala, John O.	C.E.	1927	Lanesville
Harrington, Elvin E.	M.E.	1926	Milton
Harris, Cecil K.	M.E.	1927	Nova Scotia
Harris, Henry S.	Ch.E.	1925	Allston
Hasenfuss, Joseph N.	C.E.	1927	Boston
Haskins, Elmer E.	M.E.	1925	Dighton
Haskins, George A.	C.E.	1926	Middleton
Hatch, James B.	C.E.	1927	Arlington Heights
Hathaway, Carlton W.	C.E.	1928	New Bedford
Havlicek, Joseph A.	C.E.	1925	Middletown, Conn.
Hawes, Elbridge W.	M.E.	1928	Salem
Haynes, Walter W.	E.E.	1928	Bangor, Me.
Heath, Elroy E.	E.E.	1927	Sharon, Vt.
Hedlund, Charles F.	E.E.	1925	Braintree
Hemmenway, Donald L.	E.E.	1928	Bryantville
Henderson, Lester K.	E.E.	1927	North Abington
Herholz, John A.	C.E.	1928	Clinton
Hetherington, James V.	E.E.	1928	Roxbury
Hettinger, Francis B.	M.E.	1927	Boston
Heyer, William T.	M.E.	1928	Newport, Vt.
Heywood, Andrew H.	E.E.	1926	North Yarmouth, Me.
Hicks, James C.	E.E.	1928	Walnut Hill, Me.
Higgins, Paul	M.E.	1927	Medford
Hill, Ernest J., Jr.	Ch.E.	1928	Saugus
Hill, Preston W.	Ch.E.	1925	Brookline
Hillsgrove, James W.	M.E.	1928	Melrose
Hilton, Henry B.	C.E.	1926	Danvers

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Hilton, William B.	C.E.	1928	<i>Danvers</i>
Hiltz, Walter M.	E.E.	1925	<i>Everett</i>
Hinckley, Herbert P.	M.E.	1925	<i>Mamaroneck, N. Y.</i>
Hirst, Edmund	M.E.	1928	<i>Bridgewater</i>
Hobbs, Clinton L.	M.E.	1928	<i>Jay, Me.</i>
Hobbs, Maurice P.	C.E.	1928	<i>Mansfield</i>
Hodgdon, Theodore A.	M.E.	1927	<i>Cliftondale</i>
Hodgkins, Myles M.	Ch.E.	1926	<i>Roslindale</i>
Hoffman, Frederick T.	E.E.	1928	<i>Holbrook</i>
Holmstead, Harold	E.E.	1928	<i>Boston</i>
Holmes, Harry F.	E.E.	1928	<i>South Hamilton</i>
Holsey, Sumner L.	Ch.E.	1928	<i>Boston</i>
Holt, Walter L.	Ch.E.	1927	<i>Whitman</i>
Homkowycz, Theodore	C.E.	1928	<i>Brighton</i>
Hopkins, Howe H.	M.E.	1925	<i>Trenton, Me.</i>
Houghton, Horace C.	M.E.	1926	<i>Dorchester</i>
Howard, Manley R.	E.E.	1928	<i>Mansfield</i>
Howes, Frank W.	C.E.	1928	<i>Dolgeville, N. Y.</i>
Hubby, Paul E.	M.E.	1926	<i>Boston</i>
Hughes, Edward F., Jr.	M.E.	1928	<i>Watertown</i>
Hull, Randolph M.	E.E.	1926	<i>High Point, N. C.</i>
Humphrey, Weldon C., Jr.	M.E.	1927	<i>Middleton</i>
Hunt, Charles W.	E.E.	1927	<i>Boston</i>
Hunt, Percival R.	M.E.	1926	<i>Salem</i>
Hurlburt, Charles E.	E.E.	1927	<i>Danvers</i>
Hurlihe, William J.	C.E.	1927	<i>Danbury, Conn.</i>
Hutchins, Linwood N.	C.E.	1928	<i>Portland, Me.</i>
Hutt, Chester M.	M.E.	1927	<i>Berlin</i>
Jacobs, John J.	M.E.	1928	<i>Boston</i>
Jacobson, Morris	E.E.	1928	<i>Winthrop</i>
James, Shirrell M.	M.E.	1928	<i>Worcester</i>
Janih, Louis J.	E.E.	1928	<i>Chicopee</i>
Janssen, Julius R.	M.E.	1927	<i>South Manchester, Conn.</i>
Jarvis, Clayton	M.E.	1928	<i>Newburyport</i>
Jennings, Louis A.	E.E.	1927	<i>Broadway, Va.</i>
Jensen, Lloyd A.	C.E.	1928	<i>West Roxbury</i>
Jepson, Milton W.	E.E.	1928	<i>New Bedford</i>
Johansen, Joseph A.	M.E.	1928	<i>Roslindale</i>
Johanson, Carl G., Jr.	E.E.	1928	<i>Concord Junction</i>
Johnson, Arthur L.	E.E.	1927	<i>Boston</i>
Johnson, George C.	E.E.	1928	<i>West Roxbury</i>
Johnson, George E.	M.E.	1927	<i>Campello</i>
Johnson, Harold S.	E.E.	1928	<i>Hartford, Conn.</i>
Johnson, Henry R.	C.E.	1928	<i>Brockton</i>
Johnson, Theodore A.	C.E.	1925	<i>Marlboro</i>
Johnston, William R.	M.E.	1927	<i>Clinton</i>
Jones, Archibald L.	E.E.	1925	<i>Middleton</i>
Jones, Harry O.	E.E.	1928	<i>Watertown</i>
Jones, Henry C., Jr.	M.E.	1925	<i>Lowell</i>
Jordan, Harold P.	M.E.	1926	<i>Brockton</i>
Kalinsky, Joseph W.	C.E.	1926	<i>Roxbury</i>
Kallelis, Nicholas S.	C.E.	1927	<i>Peabody</i>
Kalnosky, Alfonse J.	Ch.E.	1928	<i>Boston</i>

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Kalstein, Abraham	E.E.	1926	<i>Boston</i>
Kaplan, George	M.E.	1926	<i>Mattapan</i>
Katranis, George J.	E.E.	1925	<i>Boston</i>
Katziff, Julius	Ch.E.	1925	<i>Winthrop</i>
Keachie, Edward C.	E.E.	1928	<i>Bridgewater</i>
Kearney, Ralph N.	M.E.	1926	<i>Boston</i>
Keene, Albert R.	M.E.	1926	<i>Quincy</i>
Keene, William F.	M.E.	1928	<i>Framingham</i>
Keith, Walter S.	E.E.	1926	<i>Whitman</i>
Kelley, Leonard J.	E.E.	1928	<i>Amherst</i>
Kelley, Wallace M.	Ch.E.	1928	<i>Saxonville</i>
Kellogg, Edward A.	C.E.	1927	<i>Waverley</i>
Kempainen, Harry L.	M.E.	1928	<i>Fitchburg</i>
Keniston, Earl V.	C.E.	1928	<i>Nashua, N. H.</i>
Kennedy, Augustus C.	C.E.	1925	<i>Roslindale</i>
Kennedy, Parker R.	C.E.	1925	<i>Boston</i>
Kerr, Harrison D.	E.E.	1928	<i>North Adams</i>
Keville, Leo A.	C.E.	1925	<i>Lowell</i>
Kibildis, George	E.E.	1926	<i>Lawrence</i>
Kilbrith, Harry H.	E.E.	1927	<i>Bryantville</i>
Killam, Allison L.	C.E.	1928	<i>Lynn</i>
Killen, Paul J.	E.E.	1928	<i>Nantucket</i>
Kilpatrick, Lawrence E.	C.E.	1927	<i>Brooklyn, Conn.</i>
Kimball, Carleton B.	E.E.	1925	<i>Salisbury</i>
Kimball, Donald S.	M.E.	1925	<i>Bridgewater</i>
King, Arthur M.	C.E.	1925	<i>West Medway</i>
Kingsbury, Herbert F.	E.E.	1926	<i>Framingham</i>
Kinney, Harry H.	M.E.	1926	<i>Stoneham</i>
Kirkland, John F.	E.E.	1927	<i>Dorchester Center</i>
Knight, Robert H.	E.E.	1925	<i>Newburyport</i>
Knott, Benjamin	E.E.	1928	<i>Fall River</i>
Knowles, Charles A.	E.E.	1927	<i>Concord Junction</i>
Knowles, Howard F.	E.E.	1928	<i>Augusta, Me.</i>
Knowlton, Charles W.	C.E.	1928	<i>Somerville</i>
Kobchick, Thomas	Ch.E.	1928	<i>Fairfield, Me.</i>
Komich, Joseph	C.E.	1928	<i>South Boston</i>
Krohn, Bertil	E.E.	1925	<i>Hartford, Conn.</i>
Kumblad, Warren S.	Ch.E.	1928	<i>Brockton</i>
Kupka, Alexander	M.E.	1926	<i>Brockton</i>
Kusmick, Michael	C.E.	1927	<i>Hartford, Conn.</i>
LaCapria, Arthur	E.E.	1928	<i>Boston</i>
Lake, Maurice E.	E.E.	1927	<i>Hampstead, N. H.</i>
Lally, John J.	C.E.	1928	<i>Fall River, Mass.</i>
Lambert, Kenneth G.	E.E.	1928	<i>Tilton, N. H.</i>
Landry, Edward B.	Ch.E.	1928	<i>Norwood</i>
Landy, George	E.E.	1925	<i>Boston</i>
Lang, Robert H.	E.E.	1927	<i>Salem</i>
Langtry, Chester F.	C.E.	1928	<i>Framingham</i>
Lanzi, Frank L.	M.E.	1926	<i>East Hampton, Conn.</i>
Lauretzen, Walter M.	Ch.E.	1925	<i>Mattapan, Mass.</i>
Lavash, Francis L.	M.E.	1927	<i>Somerville</i>
Lavers, Willard D.	C.E.	1926	<i>Salem</i>
Lavoie, Stephen D.	E.E.	1925	<i>Winthrop</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Lawrence, Edwin	M.E.	1926	<i>Auburndale</i>
Lawson, Ernest	M.E.	1928	<i>Wollaston</i>
Lawson, Robert A.	E.E.	1928	<i>Dorchester</i>
Lawton, Robert C.	M.E.	1925	<i>Orwell, Vt.</i>
Leacy, Eugene S.	M.E.	1925	<i>Watertown</i>
Lee, Arthur W.	M.E.	1927	<i>Carlisle</i>
Lee, Howard C.	E.E.	1928	<i>Berlin, N. H.</i>
Lee, Robert E.	C.E.	1927	<i>Gardner</i>
Lehan, John F.	E.E.	1928	<i>Cambridge</i>
Leonard, Harry T.	C.E.	1928	<i>Milford</i>
Leonard, Richard J.	E.E.	1927	<i>Newton</i>
Lessard, Theodore T.	C.E.	1925	<i>Springfield</i>
Leussler, James A.	C.E.	1928	<i>Jamaica Plain</i>
Lewis, Edgar V.	E.E.	1928	<i>Middleboro</i>
Lewis, Reginald J.	M.E.	1928	<i>Old Orchard, Me.</i>
L'Heureux, Joseph A.	C.E.	1926	<i>Lowell</i>
Lieberman, Norman	C.E.	1928	<i>Woburn, Mass.</i>
Libbey, Theodore A.	M.E.	1928	<i>South Berwick, Me.</i>
Lightbown, John	E.E.	1926	<i>New Bedford</i>
Lindgren, Oscar R.	C.E.	1926	<i>Ansonia, Conn.</i>
Linscott, Mellen C.	C.E.	1927	<i>Woodford, Me.</i>
Ljunglof, C. John	C.E.	1928	<i>Dorchester</i>
Locke, Roger P.	M.E.	1925	<i>Salem</i>
Lofgren, Rudolph A.	C.E.	1927	<i>Quincy</i>
Longley, Raymond J.	Ch.E.	1926	<i>Boston</i>
Lord, Harold M.	E.E.	1928	<i>Skowhegan, Me.</i>
Lord, Samuel E., Jr.	E.E.	1928	<i>Lowell</i>
Lounsbury, Earle L.	M.E.	1928	<i>Malden</i>
Lovejoy, Edgar E.	E.E.	1928	<i>Newport, N. H.</i>
Lurie, Eli	E.E.	1928	<i>Winthrop</i>
Lyman, Edward C.	E.E.	1927	<i>Watertown</i>
Lyman, Eugene A.	C.E.	1927	<i>Springfield</i>
Lynch, Thomas J.	M.E.	1925	<i>Dorchester</i>
Lyon, Harold C.	C.E.	1928	<i>Leominster</i>
Lyons, Albert T.	C.E.	1928	<i>Boston</i>
Lyons, Raymond B.	C.E.	1927	<i>Brooklyn, N. Y.</i>
Mabey, Melvin J.	C.E.	1925	<i>Newton</i>
Macaulay, James E.	C.E.	1925	<i>Medford</i>
MacConnell, Norman J.	E.E.	1925	<i>Medford</i>
MacDonald, Hugh C.	E.E.	1928	<i>North Abington</i>
MacDonald, John D.	Adm.E.	1928	<i>Melrose Highlands</i>
MacKenna, Leon J.	M.E.	1926	<i>Fort Covington, N. Y.</i>
MacKinnon, Robert B.	C.E.	1928	<i>Roslindale</i>
MacKinnon, Weber J.	E.E.	1928	<i>Meriden, Conn.</i>
MacLachlan, Robert D.	Ch.E.	1927	<i>Roslindale</i>
MacLean, Kenneth G.	E.E.	1928	<i>Quincy</i>
MacLeod, Edward M.	E.E.	1927	<i>East Dedham</i>
MacLeod, Harold L.	C.E.	1927	<i>Quincy</i>
Macomber, Paul C.	Ch.E.	1927	<i>Marshfield</i>
MacRae, Donald R.	M.E.	1928	<i>Bridgewater</i>
Maddocks, Joseph W.	E.E.	1926	<i>Gardiner, Me.</i>
Mahoney, James B.	E.E.	1925	<i>Portsmouth, N. H.</i>
Mahoney, Michael A.	C.E.	1927	<i>Quincy</i>

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Maier, William F.	E.E.	1925	<i>Dorchester</i>
Mailhot, Wilbrod A.	E.E.	1925	<i>Sanford, Me.</i>
Malkasian, Zaven	C.E.	1927	<i>Watertown</i>
Malloch, Ernest M.	C.E.	1925	<i>Eastport, Me.</i>
Manuel, Frank E.	C.E.	1928	<i>Boston</i>
Marden, George F.	E.E.	1927	<i>Brockton</i>
Marion, Jack	C.E.	1928	<i>Chelsea</i>
Marks, Stanley E.	Ch.E.	1927	<i>Lynn</i>
Marr, John F.	Ch.E.	1926	<i>Revere</i>
Marston, Francis J.	C.E.	1928	<i>Boston</i>
Martens, Rolk H.	M.E.	1928	<i>West Roxbury</i>
Martin, Arthur D.	C.E.	1926	<i>Richford, Vt.</i>
Martinelli, Henry C.	M.E.	1925	<i>Springfield</i>
Matakactis, Michael C.	C.E.	1927	<i>Middlebury, Conn.</i>
Mathers, Ernest	C.E.	1926	<i>Milton</i>
Matthews, Adrian M.	M.E.	1926	<i>Bristol, Conn.</i>
Maurette, Rene G.	E.E.	1925	<i>Medford</i>
Maxwell, Sherman O.	M.E.	1925	<i>Boston</i>
Mayo, Silsby B.	M.E.	1927	<i>Everett</i>
Mazzaferro, Joseph	M.E.	1928	<i>Waterbury, Conn.</i>
Mead, Rolan J.	E.E.	1928	<i>Townsend</i>
Meehan, John J.	C.E.	1928	<i>Jamaica Plain</i>
Megley, James W.	E.E.	1927	<i>Avon</i>
Mekkelsen, Maurice	Ch.E.	1927	<i>W. Somerville</i>
Melcher, George H.	C.E.	1926	<i>Salem</i>
Mellish, James E.	Ch.E.	1926	<i>Prince Edward Island</i>
Mellor, Frederick	C.E.	1926	<i>New Bedford</i>
Meo, Domenico, Jr.	Ch.E.	1928	<i>Boston</i>
Merchant, Milton H.	Ch.E.	1927	<i>Wollaston</i>
Mercier, Albert J.	C.E.	1928	<i>Barre, Vt.</i>
Merrill, Louis F.	M.E.	1925	<i>Wollaston</i>
Merrill, Oliver E.	E.E.	1927	<i>Wollaston</i>
Merrill, Robert C.	E.E.	1928	<i>Cumberland Center, Me.</i>
Merz, Arthur A.	E.E.	1927	<i>Greenfield</i>
Meserve, George H., Jr.	C.E.	1925	<i>Medford</i>
Meyer, George E.	C.E.	1927	<i>Norwood</i>
Mihaljan, Manuel J.	C.E.	1926	<i>Greece</i>
Millen, Alan R.	C.E.	1926	<i>Quincy</i>
Miller, Charles W.	E.E.	1927	<i>South Hanover</i>
Moauero, Joseph S.	E.E.	1926	<i>Springfield</i>
Moore, Charles K.	C.E.	1925	<i>Fall River</i>
Moore, Francis B.	E.E.	1927	<i>W. Stewartstown, N. H.</i>
Moran, Ernest H.	M.E.	1928	<i>Framingham</i>
Moreau, Wendell Scott	C.E.	1928	<i>Chicopee</i>
Morgan, Frank L.	E.E.	1928	<i>Andover, Me.</i>
Morley, Frank W.	E.E.	1926	<i>Hyde Park</i>
Morris, Preston H.	E.E.	1927	<i>Nantucket</i>
Morrow, Emerson S.	M.E.	1927	<i>Framingham</i>
Morse, Howard W.	E.E.	1925	<i>Lynn</i>
Morse, Ralph H.	E.E.	1928	<i>Marblehead</i>
Morton, Henry I.	Ch.E.	1927	<i>Fairhaven</i>
Moulthrop, Leroy S.	C.E.	1927	<i>Shelton, Conn.</i>
Moulton, Earl L.	M.E.	1926	<i>E. Weymouth</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Mowatt, George L.	Ch.E.	1928	<i>Derby, Me.</i>
Munsey, Donald W.	E.E.	1927	<i>New Harbor, Me.</i>
Murphy, Nelson L.	C.E.	1926	<i>Waltham</i>
Murphy, Ronald S.	E.E.	1927	<i>New Preston, Conn.</i>
Murphy, Walter J.	Ch.E.	1926	<i>E. Walpole</i>
Murray, Arthur E.	M.E.	1928	<i>Beverly</i>
Murray, John M.	E.E.	1928	<i>Revere</i>
Mutrie, Joseph A.	C.E.	1928	<i>Dorchester</i>
McCallum, Norman W.	E.E.	1927	<i>Lowell</i>
McCarthy, John J.	E.E.	1927	<i>Medford</i>
McCarthy, Norman F.	E.E.	1927	<i>Norwood</i>
McCarthy, William J.	E.E.	1928	<i>Peabody</i>
McClure, Harold E.	Ch.E.	1926	<i>Lawrence</i>
McCool, James H.	E.E.	1925	<i>South Boston</i>
McCoombe, Charles M.	E.E.	1926	<i>Atlantic</i>
McCrillis, Donald	E.E.	1926	<i>Wollaston</i>
McDonald, Leslie P.	E.E.	1927	<i>Beecher Falls, Vt.</i>
McElwee, Ira	Ch.E.	1927	<i>Lubec, Me.</i>
McGee, Harold B.	Ch.E.	1926	<i>Roxbury</i>
McGivern, James G.	M.E.	1928	<i>Boston</i>
McGrath, Russell P.	C.E.	1927	<i>Windsor, Conn.</i>
McGuerty, Charles V.	M.E.	1925	<i>Woburn</i>
McHenry, Hiram S.	C.E.	1928	<i>Sagamore</i>
McKenna, George A.	C.E.	1926	<i>Waltham</i>
McKnight, Lawrence S.	E.E.	1928	<i>East Thetford, Vt.</i>
McKown, Henry M.	E.E.	1927	<i>Gloucester</i>
McLearn, John	M.E.	1928	<i>Swampscott</i>
McManamin, Edward F.	C.E.	1926	<i>Wakefield</i>
McManamin, Joseph	C.E.	1928	<i>Wakefield</i>
McMaster, Lauren L.	Ch.E.	1928	<i>Wakefield</i>
McNamara, Roger A.	M.E.	1928	<i>Easton</i>
McNayr, Irving H.	E.E.	1927	<i>No. Easton</i>
McRae, J. Donald	E.E.	1927	<i>Brookline</i>
Nash, Ralph E.	E.E.	1927	<i>Peabody</i>
Naski, Balestaw P.	E.E.	1928	<i>N. Walpole, N. H.</i>
Nason, Louis T.	E.E.	1928	<i>Boston</i>
Negus, Kenneth D.	C.E.	1927	<i>Gardner</i>
Neil, Dexter S.	C.E.	1926	<i>Lowell</i>
Neill, Walter B.	E.E.	1928	<i>Boston</i>
Nelson, Carl H.	C.E.	1925	<i>Dorchester</i>
Nelson, Carl W.	E.E.	1926	<i>Brockton</i>
Nelson, John F.	M.E.	1928	<i>Gloucester</i>
Newell, David M.	E.E.	1926	<i>Amesbury</i>
Newsome, George W.	E.E.	1926	<i>Stratford, Conn.</i>
Newton, Elmer C.	E.E.	1925	<i>Springfield, Vt.</i>
Nichols, Howard A.	E.E.	1928	<i>Hudson Falls, N. Y.</i>
Nicol, James	E.E.	1926	<i>Fall River</i>
Niechcay	C.E.	1925	<i>Boston</i>
Nolf, Ralph L.	E.E.	1925	<i>Webster</i>
Norcross, Vernon	E.E.	1928	<i>East Bridgewater</i>
Norton, Gilbert F.	Ch.E.	1928	<i>Dorchester</i>
Norton, John D.	E.E.	1928	<i>Edgartown</i>
Norvish, Stephen F.	E.E.	1928	<i>Brockton</i>

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Nugent, Arthur W.	E.E.	1928	<i>Fitchburg</i>
Oberg, Rudolph O. M.	E.E.	1926	<i>Neponset</i>
O'Connell, Daniel F.	Ch.E.	1927	<i>Boston</i>
O'Connor, Charles T.	Ch.E.	1928	<i>Norwood</i>
O'Leary, Leo T.	C.E.	1925	<i>Dorchester</i>
O'Neil, William H.	E.E.	1927	<i>Greenfield</i>
Orcutt, Hordon A.	E.E.	1928	<i>Montpelier, Vt.</i>
Osborne, Raymond A.	M.E.	1928	<i>Beverly</i>
Osetek, Joseph W.	E.E.	1928	<i>Wakefield</i>
Ostrander, Edgar J.	E.E.	1927	<i>Ghent, N. Y.</i>
Otis, Dwight C.	Ch.E.	1926	<i>Melrose Highlands</i>
Owens, John F.	M.E.	1928	<i>Irvington, Conn.</i>
Packard, Edmund A.	M.E.	1928	<i>Medford</i>
Packard, Lawrence C.	E.E.	1928	<i>Dryden, Me.</i>
Padham, Vernon B.	Adm.E.	1928	<i>Madison, Me.</i>
Page, Grahame D.	M.E.	1928	<i>Everett</i>
Pagliarulo, Joseph F.	C.E.	1926	<i>East Boston</i>
Paige, Timothy V.	E.E.	1926	<i>New Salem</i>
Paine, William	E.E.	1928	<i>Plymouth</i>
Paquet, Philip A.	C.E.	1928	<i>Peterboro, N. H.</i>
Parker, Burton C.	C.E.	1925	<i>Holden, Mass.</i>
Parker, David L.	Ch.E.	1926	<i>Lynn, Mass.</i>
Parker, F. Graham	M.E.	1928	<i>Boston</i>
Parks, Harold W.	E.E.	1928	<i>Glen Lyon, Penn.</i>
Parmenter, Raymond H.	C.E.	1928	<i>Taunton</i>
Parsons, Lester J.	M.E.	1926	<i>Roxbury</i>
Patterson, Harold D.	E.E.	1927	<i>New Milford, Conn.</i>
Pearlman, Saul	M.E.	1926	<i>Mattapan</i>
Pearson, Arthur C.	Ch.E.	1928	<i>Cambridge</i>
Penniman, Frederic	C.E.	1926	<i>Whitman</i>
Pepe, Thomas A.	C.E.	1928	<i>Mattapan</i>
Perkins, Eustace J.	E.E.	1925	<i>Wenham</i>
Perrone, Frank	C.E.	1926	<i>Winthrop</i>
Perry, Kenneth W.	E.E.	1928	<i>Holliston</i>
Pestridge, Francis H.	C.E.	1926	<i>Nantucket</i>
Petersen, Ralph B., Jr.	C.E.	1928	<i>Concord</i>
Peterson, Carl M.	E.E.	1928	<i>Dorchester</i>
Peterson, Enar E. F.	E.E.	1926	<i>Brockton</i>
Peterson, Rutger E.	C.E.	1928	<i>Holbrook</i>
Pettersen, Victor S.	Ch.E.	1928	<i>Dorchester</i>
Pfeferholtz, Benjamin	E.E.	1926	<i>Lawrence</i>
Phelps, James C.	E.E.	1928	<i>Melrose</i>
Phillips, Benjamin E.	M.E.	1927	<i>Beverly</i>
Pierce, Melvin G.	E.E.	1925	<i>Arlington</i>
Pierce, William M.	Ch.E.	1926	<i>Melrose</i>
Piispanen, Arthur J.	E.E.	1927	<i>Quincy</i>
Pillsbury, Arthur M.	C.E.	1926	<i>Gorham, Me.</i>
Pion, Noel A.	E.E.	1926	<i>Brockton</i>
Pitman, William H.	C.E.	1928	<i>Salem</i>
Platter, Charles T.	C.E.	1926	<i>Boston</i>
Plett, Walter P.	E.E.	1927	<i>Boston</i>
Poley, Abraham A.	E.E.	1925	<i>Boston</i>
Pomeroy, Alden W.	M.E.	1928	<i>Gloucester</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Popkin, Joseph D.	C.E.	1928	<i>Fall River</i>
Porter, Charles S.	E.E.	1928	<i>Exeter, N. H.</i>
Potter, Bernard A.	C.E.	1928	<i>Lynn</i>
Potter, William F.	E.E.	1928	<i>Boston</i>
Pratt, Ralph G.	C.E.	1928	<i>Bradford, Vt.</i>
Pride, Cecil W.	C.E.	1927	<i>Medford</i>
Prior, Leon B.	E.E.	1927	<i>Houghs Neck</i>
Prophet, Alta E.	C.E.	1925	<i>Clinton</i>
Prowse, Robert J.	C.E.	1928	<i>Concord, N. H.</i>
Rae, Arthur N.	C.E.	1927	<i>Jamaica Plain</i>
Rae, William M., Jr.	C.E.	1928	<i>Jamaica Plain</i>
Raffa, Aldo	Adm.E.	1928	<i>Weymouth</i>
Rafferty, Thomas E.	C.E.	1927	<i>Boston</i>
Raffone, William P.	E.E.	1927	<i>New Haven, Conn.</i>
Ramm, Harry H.	M.E.	1927	<i>Roxbury</i>
Ramsay, Richard H.	Ch.E.	1928	<i>Berlin, N. H.</i>
Ramsdell, Lawson H.	Ch.E.	1928	<i>Livermore Falls, Me.</i>
Range, Howard R.	C.E.	1928	<i>No. Easton</i>
Rauch, Gordon H.	M.E.	1927	<i>E. Weymouth</i>
Ravreby, Abraham A.	Ch.E.	1925	<i>Boston</i>
Ray, Clayton A.	Ch.E.	1925	<i>Revere</i>
Read, Herbert C.	Ch.E.	1925	<i>Springfield</i>
Redlon, Gilbert F., Jr.	E.E.	1926	<i>Wollaston</i>
Reed, Kenneth D.	M.E.	1925	<i>Winthrop</i>
Reed, Paul F.	C.E.	1927	<i>Boston</i>
Reinhart, Alvin R.	M.E.	1928	<i>West Roxbury</i>
Reitmayer, George C.	E.E.	1928	<i>Belmont</i>
Remarman, Samuel	Ch.E.	1927	<i>Chelsea</i>
Renker, Charles L.	M.E.	1927	<i>Waterbury, Conn.</i>
Renton, Ralph J.	E.E.	1927	<i>Quincy</i>
Repilado, Eugene	E.E.	1928	<i>Dolgeville, N. Y.</i>
Reuther, Willard E.	E.E.	1925	<i>Jefferson,</i>
Rhodes, Wilfred R.	C.E.	1927	<i>Watertown</i>
Riccio, Angelo P.	M.E.	1926	<i>Watertown</i>
Rice, Reginald H.	C.E.	1926	<i>Concord, N. H.</i>
Rich, Maurice	E.E.	1927	<i>Roxbury</i>
Richards, A. J.	M.E.	1927	<i>Beverly</i>
Richards, Charles N. A.	C.E.	1925	<i>Milton</i>
Richardson, Norman B.	Ch.E.	1928	<i>North Andover</i>
Richman, Hyman P.	E.E.	1926	<i>Quincy</i>
Richmond, Nelson R.	E.E.	1928	<i>Pittsfield</i>
Richmond, Stanley D.	E.E.	1928	<i>So. Manchester, Conn.</i>
Ricker, Raymond A.	E.E.	1928	<i>Ricker Mills, Vt.</i>
Rideout, Gordon T.	C.E.	1928	<i>Everett</i>
Rietzel, Theodore E.	E.E.	1928	<i>Boston</i>
Riley, Edward F.	M.E.	1926	<i>Wareham</i>
Rising, Lawrence C.	E.E.	1927	<i>Newton Center</i>
Rizoli, Louis J.	E.E.	1928	<i>Salem</i>
Roberts, Albert A.	C.E.	1928	<i>E. Limington, Me.</i>
Roberts, George I.	E.E.	1925	<i>E. Weymouth</i>
Robinson, Earle C.	C.E.	1927	<i>Wilmington</i>
Rocchi, Frank	C.E.	1925	<i>Everett</i>
Rogers, Allan H.	E.E.	1925	<i>Jonesport, Me.</i>

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Rogers, Eugene H.	Adm.E.	1928	<i>Beverly</i>
Rollings, Gerald D.	Ch.E.	1927	<i>Dorchester</i>
Rollins, Kendrick D.	E.E.	1928	<i>Roxbury</i>
Rose, Sayre B.	Adm.E.	1928	<i>Glastonbury, Conn.</i>
Rosnosky, Julian	Ch.E.	1928	<i>Roslindale</i>
Rosoff, Leo	M.E.	1928	<i>Hudson</i>
Ross, Alec	C.E.	1928	<i>Chelsea</i>
Ross, Arthur I.	Ch.E.	1926	<i>Chelsea</i>
Ross, Edison H.	E.E.	1927	<i>Norton</i>
Ross, Elmer G.	M.E.	1927	<i>Leominster</i>
Rostedt, Ero E.	E.E.	1928	<i>Fitchburg</i>
Roy, Roland	E.E.	1928	<i>Lawrence</i>
Rubin, Morris	C.E.	1925	<i>Roxbury</i>
Rumball, Paul G.	E.E.	1928	<i>Beverly</i>
Rundberg, Eric G. S.	M.E.	1928	<i>Deep River, Conn.</i>
Russell, Jeremiah W.	E.E.	1928	<i>Roslyn, N. Y.</i>
Rylander, Everett A.	E.E.	1926	<i>Marlboro</i>
Sacco, Benjamin J.	E.E.	1928	<i>Boston</i>
Salis, Sidney	Ch.E.	1926	<i>Roxbury</i>
Saltmarsh, Howard A.	C.E.	1927	<i>Medford</i>
Sampson, James	M.E.	1926	<i>Roxbury</i>
Sanborn, Merle M.	C.E.	1928	<i>Winthrop, Me.</i>
Sanderson, Albert E.	C.E.	1925	<i>Waltham</i>
Sanderson, Page	C.E.	1926	<i>Wellesley</i>
Sands, Arthur E.	Ch.E.	1927	<i>East Lynn</i>
Sandstrom, Ernest W.	C.E.	1927	<i>Somerville</i>
Sargent, John M. W.	C.E.	1928	<i>Beverly</i>
Satterlee, Howard A.	E.E.	1928	<i>Needham Heights</i>
Savage, Raymond	C.E.	1928	<i>Lowell</i>
Savani, George R.	C.E.	1928	<i>Somerville</i>
Savery, Arlo R.	C.E.	1926	<i>Silver Lake</i>
Sawin, George W.	C.E.	1926	<i>Dorchester</i>
Sawyer, Chester B.	E.E.	1928	<i>Needham</i>
Sawyer, Richard M.	M.E.	1928	<i>Roxbury</i>
Sayward, Paul H.	M.E.	1925	<i>Allston</i>
Schneider, Arthur E.	Ch.E.	1925	<i>Meriden, Conn.</i>
Schonour, Ernest	E.E.	1928	<i>Gouglersville, Penn.</i>
Schramm, George F.	C.E.	1926	<i>Roslindale</i>
Schwartz, Simon	E.E.	1928	<i>Lawrence</i>
Scussel, Robert	C.E.	1927	<i>Stafford Springs, Conn.</i>
Seaman, Walter R.	M.E.	1925	<i>Roxbury</i>
Selin, Arthur	C.E.	1928	<i>Worcester</i>
Semenyna, Waldimir	C.E.	1925	<i>Boston</i>
Serrano, Carlos	M.E.	1927	<i>Porto Rico</i>
Shanbaum, Israel	C.E.	1928	<i>Clinton</i>
Shapiro, Carl L.	Ch.E.	1928	<i>Chelsea</i>
Shapiro, Oswald	C.E.	1925	<i>Fall River</i>
Sharples, David	E.E.	1925	<i>Waltham</i>
Shaw, George W.	M.E.	1928	<i>Detroit, Mich.</i>
Shaw, Walter F.	C.E.	1927	<i>Somerville</i>
Shea, Albert L.	M.E.	1925	<i>Rumford, Me.</i>
Shea, Paul C.	Ch.E.	1926	<i>East Lynn</i>
Shenk, Norman A.	C.E.	1925	<i>Medford</i>

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Shepherd, Chester D.	C.E.	1925	Everett
Sheridan, George H.	M.E.	1925	Needham
Sherman, Daniel H.	Ch.E.	1926	Roxbury
Sherys, John	E.E.	1927	Lynn
Shields, James C.	E.E.	1928	Stoughton
Shields, Wilfred H.	C.E.	1928	Dorchester
Shumavonian, Sorun P.	C.E.	1925	Dorchester
Sibley, Clifton A.	M.E.	1925	Beverly
Silliman, Horace F.	Ch.E.	1927	Chester, Conn.
Silva, Roland E.	E.E.	1927	Gloucester
Simms, Leslie R.	M.E.	1928	Baltimore, Md.
Siranossian, Henry H.	C.E.	1928	Bridgewater
Sjoberg, Elmer G.	E.E.	1928	Fitchburg
Skelton, Bradford S.	E.E.	1927	Burlington, Vt.
Skinner, Charles E.	C.E.	1926	Roslindale
Skinner, Charles W.	Ch.E.	1926	Hamilton
Sloan, Robert H.	E.E.	1928	Jamaica Plain
Slocombe, Ralph E.	M.E.	1927	New Haven, Conn.
Slocum, Adelbert I.	E.E.	1927	Hyde Park
Smalley, Dayton B.	E.E.	1926	Johnson, Vt.
Smart, Raymond L.	M.E.	1926	Salem
Smethurst, James T.	M.E.	1927	Chicopee
Smethurst, Joseph O.	E.E.	1928	Marblehead
Smiley, Kenneth S.	Ch.E.	1925	Skowhegan, Me.
Smith, Clarence W.	E.E.	1926	Newton
Smith, Leonard Austin	E.E.	1928	West Newton
Smith, Louis H.	C.E.	1927	Somerville
Smith, William P.	M.E.	1926	Lawrence
Solomon, Louis	M.E.	1928	Colchester, Conn.
Soly, Hector E.	C.E.	1927	New Bedford
Soule, Ralph M.	C.E.	1928	Middleboro
Souther, Shirley M.	E.E.	1927	Hingham
Southworth, Rodney C.	M.E.	1927	So. Middleboro
Spear, Frank F.	C.E.	1928	Everett
Spinali, Domenic	C.E.	1928	Boston
Spyut, Albert B.	E.E.	1927	Ipswich
Squier, Roger W.	C.E.	1925	Boston
Staffhorst, Harry D.	M.E.	1926	Lynn
Stein, Melvin O.	E.E.	1927	Rockport
Stephenson, William	C.E.	1925	Needham
Stern, Frederick P.	C.E.	1925	Somerville
Stetson, Robert C.	Ch.E.	1927	South Hanover
Stevens, Charles N.	E.E.	1925	West Medford
Stewart, James C.	Ch.E.	1926	Brookline
Stewart, Robert J.	E.E.	1927	Walpole
Stimpson, Charles H., Jr.	C.E.	1926	Weston
Stocker, Robert N.	M.E.	1928	Wardsboro, Vt.
Stonefield, John W.	E.E.	1928	Scituate
St. Pierre, Stowell S.	E.E.	1928	Concord, N. H.
Steutermann, Raymond A.	E.E.	1928	Danvers, Mass.
Stone, Bernard W.	E.E.	1928	Holliston
Stone, Kendall T.	Ch.E.	1928	Dorchester
Straw, Richard H.	Ch.E.	1927	Melrose

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Strout, Phillips E.	E.E.	1928	Keene, N. H.
Stuckert, Ernest M.	E.E.	1927	Maynard
Sturdevant, Denton N.	E.E.	1928	King Ferry, N. Y.
Sullivan, Milton C.	E.E.	1928	Bradford
Sullivan, Raymond	E.E.	1928	Fall River
Sullivan, Robert J.	E.E.	1926	Roslindale
Sullivan, Thomas H.	M.E.	1928	Salem
Sullivan, William E. R.	Ch.E.	1928	Dorchester
Swain, Raymond	M.E.	1927	Newtonville
Swanson, Eric O.	C.E.	1927	Proctor, Vt.
Swanson, Norman T.	E.E.	1927	Rockport
Swanson, Stuart E.	Ch.E.	1927	No. Grosvenor Dale, Conn.
Swift, Bernard	M.E.	1928	Melrose
Swift, Ralph E.	M.E.	1925	Longmeadow
Sylvester, Joseph J.	M.E.	1927	So. Manchester, Conn.
Sylvia, Manuel	M.E.	1928	Nantucket
Szlanda, Stanislaw	C.E.	1927	Fall River
Taber, Lloyd E.	E.E.	1928	Acushnet
Taft, Leonard Walter	E.E.	1928	Natick
Tarbell, Kenneth D.	E.E.	1927	Peterboro, N. H.
Tasse, George R.	M.E.	1926	Worcester
Tassinari, Dante	C.E.	1927	East Boston
Taylor, Clarence W.	Ch.E.	1926	Allston
Teed, Roy W.	Ch.E.	1928	Hartford, Conn.
Telfer, Elmer V.	E.E.	1927	Medford
Theberge, Albert R.	E.E.	1927	Lawrence
Theriault, Joseph E.	C.E.	1925	Watertown
Thomas, Robert R.	M.E.	1925	Cambridge
Thompson, George M.	M.E.	1926	Norwood
Thompson, George D.	C.E.	1928	Dorchester
Thompson, Gordon M.	Ch.E.	1926	Andover
Thompson, Stuart W.	Ch.E.	1928	Bryantville
Thomson, Earl H.	M.E.	1925	Boston
Thorne, Lester A.	E.E.	1927	Somerville
Thwing, Stanley G.	E.E.	1925	Cambridge
Tierney, George F.	C.E.	1927	Belmont
Tighe, John G.	C.E.	1928	Dorchester
Tileston, Clarence C.	Ch.E.	1926	West Roxbury
Titcomb, Oliver S.	M.E.	1925	Somerville
Tobey, John	C.E.	1928	Falmouth
Todd, Raymond P.	E.E.	1927	North Haven, Conn.
Todino, Frank	E.E.	1928	Milford
Tompkins, Herschel M.	Ch.E.	1928	Belfast, Me.
Trask, Philip H.	E.E.	1928	Quincy
Tribou, Sherwood G.	E.E.	1928	Lewiston, Me.
Troccoli, Frank A.	E.E.	1926	Malden
True, Donald W.	M.E.	1928	Malden
Tucker, Nathan	C.E.	1925	Roxbury
Tucker, Newton E.	C.E.	1925	New Britain, Conn.
Tucker, Roy P.	Ch.E.	1927	Gloucester
Turner, Elmer A.	E.E.	1926	Marlboro
Tyack, Leroy C.	E.E.	1927	Waterbury, Conn.
Tyrrell, Harold F.	C.E.	1926	Claremont, N. H.

SCHOOL OF ENGINEERING

NAME	DEPT.	YEAR	HOME ADDRESS
Ulm, Kenneth S.	C.E.	1928	Somerville
Upham, Walter E.	E.E.	1928	Weston
Urlwin, George J.	C.E.	1928	Somerville
Urquhart, James W.	C.E.	1926	Waltham
Urquhart, William J.	Ch.E.	1927	No. Weymouth
Valentine, Myron E.	C.E.	1927	West Medford
Varney, Carroll F.	M.E.	1928	North Brookfield
Verderame, John	E.E.	1927	Southington, Conn.
Vertic, John J.	C.E.	1926	Lawrence
Vinal, Albert F.	Ch.E.	1927	Boston
Vines, Henry J.	M.E.	1928	Greenbush
Vines, Wesley G.	M.E.	1927	Greenbush
Visconti, Joseph A.	C.E.	1928	Milford
Visnick, Alexander	M.E.	1925	Mattapan
Volk, Walter L.		1928	Dedham
Wagner, Herbert E.	E.E.	1926	Lowell
Wakefield, Waldo E.	M.E.	1927	Winter Harbor, Me.
Waldron, F. Elliott	E.E.	1925	Gloucester
Walker, Arnold C.	E.E.	1928	Winchester
Walker, Elmer S.	E.E.	1927	Salem
Wall, Roy H.	Ch.E.	1926	Worcester
Wanzer, Arthur W.	M.E.	1927	Dorchester
Warren, Roland A.	C.E.	1927	Boston
Watson, Francis	M.E.	1925	Jamaica Plain
Watt, Arthur	Ch.E.	1928	North Easton
Weatherbee, John A.	E.E.	1928	Dedham
Webb, George K.	E.E.	1928	Kennebunk, Me.
Weeden, Edward R.	M.E.	1927	Scituate
Weinberg, Philip	Ch.E.	1928	Roxbury
Weinberg, Samuel	Ch.E.	1927	Boston
Welch, John E.	E.E.	1926	Springfield
Wells, Myron P.	C.E.	1927	Springfield
Wendelin, Carl G.	E.E.	1928	Concord, N. H.
Wentworth, Winston P.	E.E.	1928	Bucksport, Me.
Weschrob, Charles W.	M.E.	1925	East Dedham
West, Irving W.	M.E.	1928	Westboro
West, Kenneth W.	M.E.	1927	Harvard
Weston, Irving L.	E.E.	1927	Lynn
Wheaton, Myron E.	E.E.	1926	Washington Depot, Conn.
Wheeler, Harold W.	Ch.E.	1925	Winthrop
Wheeler, Holland S.	E.E.	1926	Keene, N. H.
Whenman, John H.	M.E.	1926	East Princeton
White, Chester E.	M.E.	1927	Brockton
White, William A.	E.E.	1928	Provincetown
White, William C.	E.E.	1925	Dorchester
Whitehead, Arthur F.	M.E.	1925	Norfolk Downs
Wickerson, Clarence R.	C.E.	1926	Milton
Wickstrand, Norman M.	M.E.	1927	Meriden, Conn.
Wikdahl, Walter E.	E.E.	1928	Brockton
Wilber, Karl H.	C.E.	1928	So. Amboy, N. J.
Wilbur, Herbert H.	M.E.	1926	Waltham
Wiley, Charles H.	E.E.	1926	Hartford, Conn.
Wilgren, Niilo J.	E.E.	1926	Stow

NORTHEASTERN UNIVERSITY

NAME	DEPT.	YEAR	HOME ADDRESS
Wilhem, Joseph F.		1928	<i>New Mexico</i>
Wilkinson, F. Maxwell	M.E.	1927	<i>Boston</i>
Williams, Cheney H.	M.E.	1928	<i>Williamsville, Vt.</i>
Williams, Clifton S.	E.E.	1925	<i>Hartford, Conn.</i>
Williamson, James E.	Ch.E.	1927	<i>Dorchester</i>
Williston, Everett	E.E.	1928	<i>Fall River</i>
Wilson, David C.	M.E.	1925	<i>Norwalk, Conn.</i>
Wilson, Fred B.	M.E.	1927	<i>Boston</i>
Wilson, Herbert A.	C.E.	1926	<i>West Roxbury</i>
Winch, Norman M.	C.E.	1928	<i>Framingham</i>
Winebaum, Thomas C.	C.E.	1928	<i>Lawrence</i>
Winshman, Alfred O.	E.E.	1928	<i>Roslindale</i>
Winslow, Lawrence A.	E.E.	1925	<i>Watertown</i>
Wistreich, Arthur I.	C.E.	1928	<i>Roxbury</i>
Witherell, Roger G.	C.E.	1926	<i>Taunton</i>
Witter, Edward J.	C.E.	1927	<i>Berlin, N. H.</i>
Wixon, Samuel J.	E.E.	1927	<i>Fall River</i>
Wolfram, Leroy H.	Ch.E.	1928	<i>Marblehead</i>
Wolfum, Carl A.	C.E.	1926	<i>Roxbury</i>
Wood, Lewis H.	E.E.	1928	<i>Northfield Farms</i>
Woodley, Harold H.	M.E.	1927	<i>Hollywood, Cal.</i>
Woodman, Norman L.	M.E.	1928	<i>Medford</i>
Worden, Arnold W.	E.E.	1928	<i>Chelmsford</i>
Works, Herbert F.	E.E.	1926	<i>Marlboro</i>
Worth, Arnold M.	E.E.	1926	<i>Springfield</i>
Wray, Bernard	C.E.	1928	<i>Winchester</i>
Wright, Walter J.	M.E.	1928	<i>Springfield, Vt.</i>
Wyman, John F.	C.E.	1928	<i>Braintree</i>
Wyner, Henry I.	C.E.	1925	<i>Allerton</i>
Wynn, Raymond A.	E.E.	1927	<i>Torrington, Conn.</i>
Yeunzela, John	M.E.	1928	<i>Montello</i>
York, James O.	E.E.	1927	<i>Beverly</i>
Young, Kenneth C.	E.E.	1925	<i>Portsmouth, N. H.</i>
Young, Walter H.	E.E.	1925	<i>Matinicus, Me.</i>
Zager, Jacob	Ch.E.	1928	<i>Hudson</i>
Zak, Alexander M.	C.E.	1925	<i>Boston</i>
Zalaznik, Joseph	C.E.	1928	<i>Chelsea</i>
Zetterlund, Ragnar A.	M.E.	1927	<i>Worcester</i>
Ziegler, George L.	M.E.	1925	<i>Concord Junction</i>

SCHOOL OF ENGINEERING

*RESIDENCE OF STUDENTS BY STATES

1924-1925

Massachusetts.....	856
Connecticut.....	68
Maine.....	54
New Hampshire.....	31
Vermont.....	26
New York.....	17
Rhode Island.....	6
New Jersey.....	2
Virginia.....	2
California.....	2
Pennsylvania.....	2
Washington, D. C.....	1
Michigan.....	1
North Carolina.....	1
South Carolina.....	1
Maryland.....	1
Nova Scotia.....	1
Cuba.....	1
Prince Edward Island.....	1
Greece.....	1
Russia.....	1
Porto Rico.....	1
Total.....	1,077

*SENIORITY SUMMARY OF STUDENTS 1924-1925

Seniors.....	169
Juniors.....	193
Sophomores.....	276
Freshmen.....	453
Total.....	1,091

*Total enrollment 1103. Late registration made it impossible to include all students in the above tables.

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NORTHEASTERN UNIVERSITY
SCHOOL OF ENGINEERING

APPLICATION FOR ADMISSION

(A fee of five dollars should accompany this application.)

Boston, Mass.....192....

To the Dean:

I (Name in full)

hereby respectfully apply for admission to the.....

Engineering Curriculum of the School of Engineering for the
school year 19 -19 , and submit the following data:

Residence.....Street

Town.....

StateTel.

Date of BirthAge

Place of Birth.....

Parent (father's) Name.....

“ “ Address

Graduate of.....High School. Year.....

Location of High School

If not a graduate, how many years were you in High School?

When did you leave?

Why did you leave?

Name of Principal.....

If employed since graduation, what is the name of your employer?
.....

Employer's address

Names and addresses of two other persons, not clergymen, to
whom we may direct inquiries concerning you. (Give former
employers' if possible.)
.....
.....
.....

CARL S. ELL, Dean,
Northeastern University,
School of Engineering,
316 Huntington Avenue,
Boston 17, Mass.

Dear Sir:

Please furnish me additional information on the following points:.....

Name.....

No. and Street

City or Town

State

NORTHEASTERN UNIVERSITY

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Four-year courses in Civil, Mechanical, Electrical, Chemical, and Administrative Engineering, leading to the degrees of Bachelor of Civil, Mechanical, Electrical, Chemical and Administrative Engineering. Conducted in co-operation with engineering firms. Students earn while they learn. Work conducted at Boston.

SCHOOL OF BUSINESS ADMINISTRATION

Four-year course in Business Administration leading to the degree of Bachelor of Business Administration. Students may specialize in Industrial Management, Marketing, Finance, Accounting, and Sales Management. A two-year course leading to a Junior Certificate. Work conducted at Boston.

EVENING SCHOOLS

SCHOOL OF LAW

(Co-educational)

Four-year course leading to the degree of Bachelor of Laws. Preparation for bar examinations and practice. High scholastic standards. A much larger percentage of graduates pass bar examinations than of any other evening law school in New England. Work conducted at Boston, and in Divisions at Worcester, Springfield, and Providence.

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Four-year courses in Professional Accounting, Marketing, and Business Administration, with specialization in banking, finance, insurance, and other fields, leading to the degrees of Bachelor and Master of Commercial Science. Special two-year courses for those desiring intensive specialization. Work conducted at Boston, and in the Divisions at Worcester, Springfield, Providence, and New Haven.

NON-COLLEGIATE SCHOOLS

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Three-year courses offered in the Evening Polytechnic School lead to a diploma in Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemistry or Structural Engineering. The work offered in these courses, while not as extensive as that leading to a degree, meets standard requirements. Students are trained for positions of trust and responsibility.

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Courses in usual high school subjects leading to a diploma. Three sixteen-week terms each year. It is possible for students to meet college entrance requirements in from three to five years. Work conducted at Boston and in Divisions at Worcester, New Haven, and Providence.

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Courses in all phases of the automotive industry with special instruction for owners, salesmen, mechanics, and chauffeurs. Classes are conducted both day and evening.

VOCATIONAL INSTITUTE

A diversified program of short intensive courses in Blueprint Reading, Public Speaking, Practical Trade Mathematics, Mechanical Drawing, Estimating, Civil Service, English for Educated Foreigners, etc.

For further information concerning any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts



NORTHEASTERN UNIVERSITY

THE DAY SCHOOL
OF
BUSINESS ADMINISTRATION
1925-1926



BOSTON YOUNG MEN'S CHRISTIAN ASSOCIATION

316 HUNTINGTON AVENUE
BOSTON, MASSACHUSETTS

Communications should be addressed to

**THE SCHOOL OF BUSINESS ADMINISTRATION
NORTHEASTERN UNIVERSITY**

316 HUNTINGTON AVENUE, BOSTON, MASSACHUSETTS

Telephone: Back Bay 4400

NORTHEASTERN UNIVERSITY

THE DAY SCHOOL
OF
BUSINESS ADMINISTRATION
1925-1926



NORTHEASTERN UNIVERSITY OF THE
YOUNG MEN'S CHRISTIAN ASSOCIATION IS INCORPORATED
UNDER THE LAWS OF MASSACHUSETTS

CALENDAR 1925-26

1925 September 14-19
 September 21
 September 22
 September 30
 October 7
 October 7
 October 12
 October 19-24
 October 28
 November 18
 November 19-25
 November 26-29
 (both inclusive)
 December 1-7
 (both inclusive)
 December 8
 December 9
 December 14-19
 December 20 to }
 January 3 }
 (both inclusive)

1926 January 23
 January 25 to }
 February 1 }
 February 2
 February 3
 February 22
 February 23-27
 March 15-20
 March 31
 April 4-11
 (both inclusive)
 April 14-16
 April 19
 April 23
 April 26-29
 April 30
 May 14
 May 22
 May 24
 June 1
 June 20
 June 21

Condition Examinations
 Registration and Payment of First Quarter Tuition
 First Semester Formal Opening
 Faculty Reception to all Students
 Intelligence Test for all Students (classes omitted)
 Sophomore Reception to Freshmen
 Columbus Day (classes omitted)
 First Monthly Hour Examination for all classes
 Freshman Reception to Upper Classmen
 Payment due for Second Quarter Tuition
 Second Monthly Hour Examination for all classes
 Thanksgiving Recess

Fraternity Social or Rush Week

Fraternity Bids Date for First-year Men
 Home Folks Day (classes omitted)
 Third Monthly Hour Examination for all classes
 Christmas Recess

First Semester Closes

Mid-year Examinations

Second Semester Formal Opening
 Payment due for Third Quarter Tuition
 Washington's Birthday (classes omitted)
 Half-hour Tests for all classes
 Fourth Monthly Hour Examination for all classes
 Payment due for final Quarter Tuition
 Easter Recess

Half-hour Tests for all classes
 Patriots' Day (classes omitted)
 Freshman Annual Spring Celebration
 Fifth Monthly Hour Examination for all classes
 Sophomore Annual Spring Celebration
 The Juniors' Annual "Prom"
 Second Semester Closes
 Final Examinations begin
 Senior Day
 Baccalaureate Address
 Commencement

OFFICE HOURS

September 1-June 1

Daily (except Saturdays and Sundays), 8.45 A.M.-5.00 P.M.
 Saturdays, 9 A.M.-1 P.M.

June 1-September 1

Daily (except Saturdays and Sundays), 9 A.M.-1 P.M.
 Saturdays, 9 A.M.-12 noon.

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B. S. GRIFFIN
Associate Editor, Boston News Bureau

Foreword

THE STUDENT AND THE SCHOOL

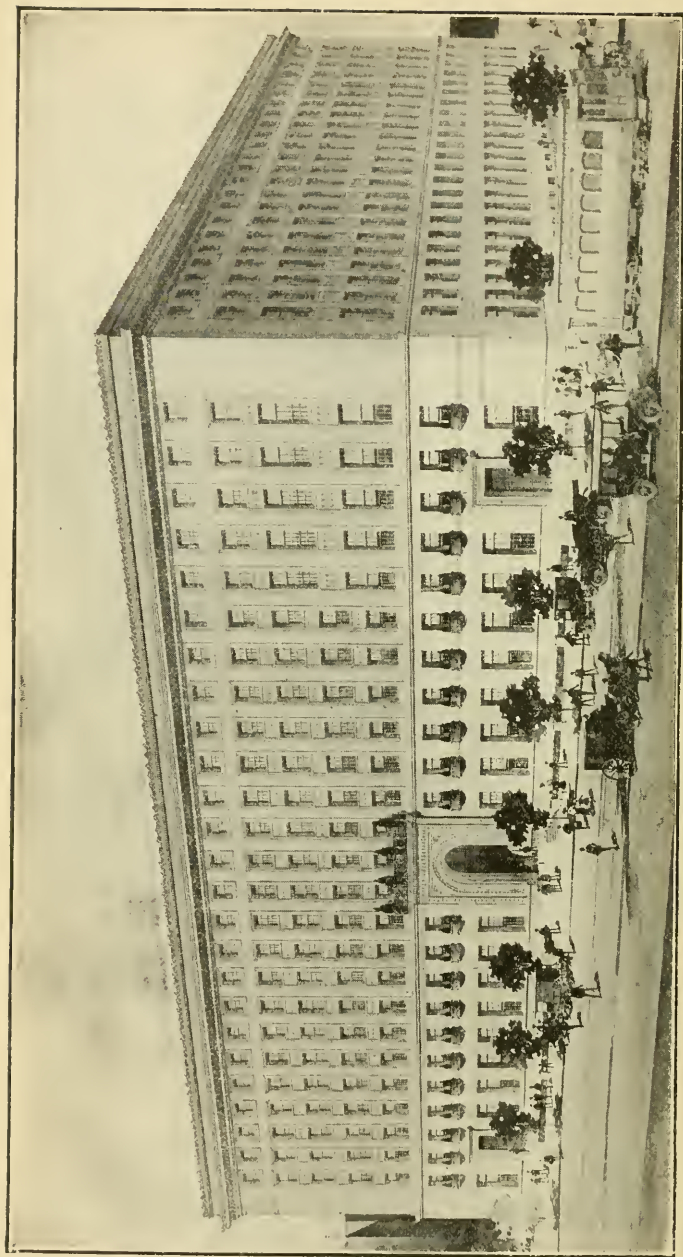
NORTHEASTERN UNIVERSITY recognizes and stresses the fact that the student of business is going to be not only a business man, but also a business man keen enough to understand that for his highest success he must perform his duties as a citizen.

The following recommendation from a master in one of the Boston schools, concerning a student in the School of Business Administration, describes the type of manhood which Northeastern University seeks:

"In all my twenty years' teaching experience, I have never seen a better boy. I would trust him with anything. I would employ him in any capacity. There are very few boys to-day that I would be willing to say that of. I cannot recommend him too highly."

Personal, social, and civic efficiency — skill, knowledge, ability that command respect; power which directs business, upbuilds communities, enriches life for others — that strength of mind and Christian character the School of Business Administration stresses above all else in the life of every student who comes under its influence.

Students who lend themselves willingly to such an influence constitute the bulk of the student body. The School will continue selecting that type for its enrolment.



Y. M. C. A. BUILDING, NORTHEASTERN UNIVERSITY

(Main Building)

Home of the School of Business Administration

UNIVERSITY INFLUENCE IN COMMERCE AND INDUSTRY

Here and there, highly capable men working up from the bottom may, without a college education, reach the station of executive control in a comparatively short time through industriousness and genius. But in the normal run of business, for the untrained man, the road from first employment to the executive desk is long and uncertain in spite of the fact that business increasingly needs capable executives.

Statistics show that about ninety per cent of college-trained business men rise to large-salaried, responsible positions, in contrast to twenty-five per cent of the non-college-trained. The reasons for this marked difference appear in the following sections:

I. REVOLUTION IN BUSINESS ORGANIZATION AND METHODS

Before the Industrial Revolution, when business was very simple, men were not professionally trained for commerce but came generally to understand primarily the practices of a business rather than the underlying principles of all business which determine the practice of a particular organization. This understanding came through mastery of detail in a particular organization by a long and slow progress gained from a succession of minor positions.

Such apprenticeship methods were, perhaps, adequate in a period when the bewilderingly complex organization of modern business did not exist.

II. MODERN BUSINESS DEMANDS UPON EXECUTIVES

To-day, our highly complex business organization, for the sake of efficiency, demands of the worker a marked degree of specialization, while compelling the executive to be both a specialist in some one field and at the same time a master of organization and administrative principles.

Since the worker must be limited to a special job, he has but a slight opportunity to get that range of experience and broad knowledge of business which alone can advance him to the higher positions. The untrained employee almost invariably learns only the details of his own job. This acquaintance with mere facts and detail may prove sufficient for mechanical performance; but broad knowledge of universal principles and ability to apply them are

unfailingly demanded of the executive who is to shape the policies of manufacturing concerns or of wholesale and retail houses.

Everywhere to-day business men are compelled to a deeper understanding of the principles underlying business operations. The paths of business are strewn with wreckage caused by the fact that many untrained minds have ventured beyond their special job. So sharp is competition, so great is the demand for fundamental and broad knowledge of business principles that our national and local Chambers of Commerce have been reorganized to help meet the demand; manufacturing and merchandising associations have been overhauled to function as a medium of exchange of knowledge; labor unions have undergone vital changes resulting in a plan to establish labor colleges for the study of economic and sociological principles underlying industry and life; and great institutions of business research with vast wealth behind them have been organized to place at the elbow of the executive those tools without which his program is largely one of guesswork.

College instruction in the science of business has helped to reduce guesswork to a science and has thereby narrowed the wide gap between employee and executive. College instruction in business has passed the uncertain period of experiment; it has demonstrated concretely the fact that through such instruction young men can master details of business more quickly than they otherwise could and, at the same time, can get a grasp upon broad and basic principles impossible to acquire from the day-by-day job.

There is marked evidence of these facts. First of all, thousands of business houses contribute liberally to colleges of business administration and coöperate with them in the guidance and placement of graduates and undergraduates. Chambers of Commerce throughout the world heartily coöperate with such colleges, many in fact depending upon these institutions to supply trained Chamber of Commerce secretaries. Indeed, in some universities, business men have endowed special schools as a source of supply for highly trained men. Some concerns, at a distance from these schools, finding that their employees could not through experience alone advance regularly to minor and major executive positions, established schools of their own.

III. PROFESSIONAL EDUCATION DEMANDED

There are at least five conclusive proofs that to-day a high professional business education is demanded as against the old-time threadbare commercial training. First, educational history shows

that no highly special kind of education ever arose except to meet a growing need. That being true, the rapid development of professional collegiate business education throughout the country since 1880 is unmistakable proof that the need exists, for business education is a highly special type of education. Secondly, many non-collegiate business schools which formerly stressed primarily business arithmetic, stenography, bookkeeping, typewriting, and other elementary forms of business, have on the whole shifted their emphasis from these minor factors to the major aspects of business organization and administration. In the third place, many such schools, not permitted by the government to confer degrees, broadly advertise courses of college grade. Finally, business itself has advanced from a position of insignificance to a professional rank that commands the utmost respect of all; and at the same time business practices have come under the direction of great economic, social, ethical laws which mark the field as a profession.

IV. HIGH PROFESSIONAL EDUCATION PROVIDED BY THE SCHOOL OF BUSINESS ADMINISTRATION

Ex-president Eliot of Harvard, speaking of business education some years ago, said: "I believe commerce and industry in their higher ranges to be eminently intellectual pursuits, and I know of no other intellectual calling for which a professional school is not now provided. To deny that young men may be systematically trained for industry and commerce is to assert that industry and commerce are merely imitative arts to be acquired only by seeing other people do the tricks and then practicing them. In industry and commerce all things are become new; and new methods of preparing young men for these occupations must be invented with discriminating foresight, established with prudence, and maintained with liberality."

These facts do not mean that graduates of the college of business administration will at once be able to assume important administrative positions. These graduates must continue to work hard, study hard, and plan hard; but because of their intimate knowledge of fundamentals of business organization and practices as a whole, of interlocking factors in business — Economics, Business Cycles, Corporation Finance, Factory Administration, Accounting, Commercial Law, Production, Distribution, Advertising, Sales Management — they can forge ahead more rapidly into the executive rank.

The reason is patent. Intricacy of organization and complexity of operation of present-day business render it almost impossible for experience alone to develop that broad perspective of organization as a whole without which a director of business hazards ruin. This broad perspective demands not mere facts but also an attitude of mind — that executive power which can initiate plans and put them into effective operation. In plain words, that point of view and that habit of mind characteristic of sound executive thinking and judgment result not so surely from experience in details as from thorough knowledge of universal principles. Executive leadership demands precisely that attitude of mind; the University purposes to develop it.

“It used to be the fashion to study medicine by cleaning the doctor’s horse and buggy, grinding his drugs, and driving him around to make his calls; and the study of law by copying deeds and briefs in a lawyer’s office and reading books taken from the lawyer’s little library in the intervals of clerical labor; but the world has now learned that there is a better way of studying medicine and law — namely, by going to a professional school, where progressive, systematic instruction rapidly developed is to be had.”

The same fact applies to education for business; professional training is required in principles as well as in detail.

Such training is best gained in the university. Within the last fifty years, primarily because of the industrial revolution which made business intricately complex, business has become a profession and collegiate commercial education has become a professional education just as that of medicine and law.

Colleges recognize the fact that to-day business demands managers, not rank and file. While executives must grasp the meaning of detail, they must much more comprehend detail in the light of those broader principles affecting all business. Hence, as in law and medicine, business education prepares for a profession, not for a mere job, although the job may be the starting point.

In fine, modern business requires men of broad vision and large mental grasp upon the facts and principles combined in industry and commerce. Business has become more nearly a science, business administration a profession. The university offering commercial education prepares for business as a science and as a profession — and in no other light whatsoever.

NORTHEASTERN UNIVERSITY

SCHOOL OF BUSINESS ADMINISTRATION

BACKGROUND

To meet the demands of modern business for broadly educated executives, American universities have, since 1897, quite generally established departments of business administration. Some have organized separate schools. All have recognized the fact that these schools cannot supplant experience; rather they supplement it by reënforcing detail knowledge, gained through individual experience, with the broad knowledge of universal principles accessible through recorded experience of thousands of executives and through the study of the economic, psychological, and sociological principles underlying experience.

DAY SCHOOL WITH DISTINCTIVE PURPOSE

For some time, officials of the University had purposed to establish a distinctive Day School of Business Administration. Conducted by the Boston Young Men's Christian Association, Northeastern University is signally characterized by the spirit of service to the community. Since the building of rational and strong Christian character constitutes one of the most distinctive services that education can render to society, and since the University, through its operation under the influence of the Young Men's Christian Association, possesses an environment peculiarly adapted to the moulding of strong Christian character, the School of Business Administration was designed to foster the development of such Christian manhood.

Nevertheless, the School is absolutely non-sectarian. While brief religious exercises, with attendance voluntary, are held at the school assemblies, conducted by religious leaders in various denominations, students are encouraged to participate in these and in other religious activities only so far as is consistent with their own particular religious beliefs. A student should not hesitate about entering the school because of religious faith, no attempt being made to influence one to participate in activities which are contrary to the tenets of his particular religion.

Since sound business rests not alone upon sound character, but also upon sane business principles, the School was organized not

only to seek every available outlet for individuality and personality, but also to provide as scientifically sound business education as possible. In other words, in order that emphasis upon Christian character building and upon education might be properly balanced, the School was also to lay the utmost stress upon developing a conservative and sane type of university education in fundamental facts and principles of business — of Accounting, Economics, Law pertaining to business organization and operation, Business Statistics, Industrial Finance, Industrial Management, Distribution, Banking, and related subjects.

In the light of that distinctive purpose, the Board of Governors of the University authorized a new School of Business Administration. The doors opened formally in September, 1922, to a body of thirty-nine students carefully selected.

So marked were the results of the first year that the second opened with one hundred students, the third with one hundred seventy-five, necessitating a restriction upon the freshman enrolment for 1925-26.

SPECIFIC EDUCATIONAL AIMS

The following aims, partially responsible for the recognition accorded the School, constitute its educational policy:

First, to offer that type of education for business which will enable the student to select more advisedly that field of business best suited to his aptitudes.

Second, to build for breadth and thoroughness in preference to overspecialization with its narrowing effects; therefore, to eliminate haphazard selection of courses, by requiring concentration upon a balanced, carefully coördinated curriculum; and, thus, to provide an adequate background for later specialization.

Third, in accordance with the highest development in education for business, to provide primarily a sound knowledge of fundamental business practices and principles through systematic study of basic business methods.

Fourth, in fine, to develop habits of accurate thinking essential to sound judgment; to develop analytical power, because of its effectiveness as a method of approach to the executive's problems.

METHODS OF INSTRUCTION

In order that these aims may be realized, the School has rejected the traditional lecture methods. Of course, there must always be lectures; nevertheless, where possible, the problem and the case method obtain instead. Sheer textbook reading is almost valueless; students tend to accept without question what the textbook presents. Instead, they should learn to analyze every proposition, to challenge unsupported assertions, to think independently, and to support their thinking with logic and facts.

Hence, concrete problems and cases which executives have faced in Accounting, Marketing, Organizing, and the like, constitute the bulk of class work. Students analyze problems, break them into their constituent parts, discover and list the factors for and against possible solutions, and work out a logical conclusion. In class they discuss their work with their instructors in the light of the latter's broader knowledge and, also, whenever possible, of the experience of executives who have actually faced these problems and have drawn their own conclusions and put them into operation. Thus the student can project his own judgment against the experiential background of business.

Such a method tends to develop an executive attitude. No lecture or mere reading of textbooks can do so. Students gain skill and facility in solving problems by actually solving hundreds and thousands of them, thereby accumulating a ripe experience seldom open to the petty employee buried in routine and mechanical detail. What counts in business, as elsewhere, is not solely whether one possesses so much knowledge, but whether one can through his knowledge logically and effectively solve the problems he confronts, or even prevent problems from arising. Experience in solving typical problems provides a background for anticipating and forestalling similar ones as well as for solving others that may arise.

SIZE OF CLASSES

Mere smallness of numbers in class work has slight significance. Some of the least effective education goes on in many small classes and some extremely effective education characterizes many large classes.

There are certain types of studies which commonly require small classes. Numerous other studies are presented with equal effectiveness in large classes. For example, law schools in general have

bulky classes; yet the teaching of law represents by and large effective education. This fact is equally true in the fields of Economics, History, and Accounting.

Accordingly, in those subjects which require presentation through small groups the classes will be correspondingly small. On the other hand, in those subjects which may be presented with equal effectiveness in large groups the classes will be larger. The nature of the work involved and effective teaching in the broadest sense constitute the determining factors in each case.

STUDENT BODY

Students are carefully selected. They must present at least fifteen units of credit from approved public high schools or private academies of corresponding rank; they must offer grades ranging from "pass" to honor grades; they must present evidence of participation in their school's activities; they must present character recommendations from (a) some teacher familiar with their work and character, (b) some school official other than the teacher, and (c) two disinterested business men. In the final determination of a student's admission, data from all sources are taken into account. No student will be admitted unless evidence indicates that he can profit thereby.

EDUCATIONAL AND VOCATIONAL GUIDANCE

Northeastern University includes in its responsibility to students not only scientifically constructed courses of instruction but also, to the extent of its power, scientific educational guidance.

This guidance and study should go hand in hand. The student should not be left to grope his way blindly; every facility of educational research should be placed at his disposal both to help him bridge the gap between high school and university methods and also to eliminate as far as possible the terrific wastage of time involved in the trial and error approach to choosing a career and preparing for it.

The School of Business Administration from the standpoint of student guidance utilizes the following methods:

1. SPECIAL LECTURES

Assemblies are held at regular periods, upon which attendance of students is required.

At these assemblies lecturers, each a specialist in a distinct field, lay before the student the results of their experience. The lecturers are, for the most part, prominent business and professional men. They are selected in such a way as to present to the students the broader phases of human relationships and to lead to an appreciation of the complex problems of social life and of the necessity for broadly trained citizenship.

In many instances special lecture periods culminate in an open forum in which students have the privilege of asking questions on particular points brought out by the lecturer. Conferences may also be arranged with him for discussing personal problems.

2. LECTURES ON ORIENTATION

A student coming from a secondary school to a university finds that his whole life has undergone a sudden change.

Educationally he is thrown upon his own responsibility in the matter of discipline and study; socially, he has entered an entirely different environment with conflicting claims; financially, he is challenged with a more independent administration of his personal affairs; morally, he finds new temptations and perplexing questions which he must successfully meet. Further than this, if not continuing to live at home, he finds that he has not that ready counsel and advice of his parents which he has had up to this time.

To help students adjust themselves to these new conditions a series of lectures, on which attendance is required, presents those topics vital in student life, and offers opportunities for students to secure counsel on their personal problems.

In addition, all freshmen are required to take a half-year course in the problem method of study, deducing therefrom the principles of study in general and methods of application.

3. PERSONAL AND GROUP SURVEYS OF BUSINESS

As constantly as possible, in all study, practical operations should be linked with theory. To provide that combination, certain courses involve field trips to business organizations and industrial concerns where students make surveys of location, equipment, organization, and methods. Such vital contact results from the coöperation of certain commercial and industrial concerns which invite inspection of their plants and study of their problems and methods. Thus, not infrequently, the manager or president of an organization reveals to these students plans, problems, and methods that books do not commonly touch. In turn, the students utilize the knowledge, experience, and facts so gained as the basis of written reports, of analysis, and of criticism, in the light of those fundamental principles studied in class.

4. BUSINESS EXPERIENCE

Valuable as these trips and surveys are they do not test the student's business ability and interest. Therefore, in addition to practical surveys, actual business experience is deemed fundamental during the course of student's training, both as a supplement to his studies and as a preparation for business activities. For this reason students are required to have had thirty weeks of practical business experience before being eligible for the degree. This experience may be secured during the summer vacations.

The University, while not definitely promising employment to students, will assist, to the best of its ability, in placing both undergraduates and graduates in desirable positions.

5. BUSINESS RESEARCH

Second-year students take one course in the study and analysis of business fields with respect to opportunities, limitations, demands. Each person selects a limited number of vocations for study. This course enables the student to decide more wisely

in regard to his career and, accordingly, to choose his field of specialization more advisedly for the last two years of his college education.

6. PERSONNEL ANALYSIS

In connection with each of the preceding methods of guidance, the School makes an intimate study of the student's personality, interests, and ability. A student, at the time of admission or shortly thereafter, will meet the following requirements:

- (a) To take a test of general intelligence.
- (b) To have a personnel analysis on the basis of:
 - (1) A carefully drafted questionnaire.
 - (2) A personal interview with the Dean or a faculty adviser.
- (c) To furnish references from whom may be obtained information which may be of value in the analysis of the individual student.

7. GUIDANCE

On the basis of the data secured, which take into account the various factors of the student's personal history, the School offers guidance along the following lines:

(a) *Personal Development.* Each student is assigned to an adviser who confers with him from time to time throughout the school year. This adviser has available for guidance in counseling a student the information which has been assembled in the School office. Attention is not only given to the problems of the student in connection with his studies, but the service is extended to include advice upon any problem in which advice is needed and desired, the aim being to guide the student to the fullest possible personal development.

(b) *Individual Ability.* The school record of each student is carefully analyzed in the light of what could reasonably be expected of him, considering his previous school record, his score on the psychological test, and the other factors in his case. If he is not doing his best work, an investigation is made to determine and eliminate the causes. If he is doing as well as could be expected or better, he is encouraged to continue to do so. In other words, each student is held to the most effective work possible through advice, encouragement, and assistance.

(c) *Business Career.* Each student, on the basis of his historical

record of his college grade, of his personal analysis, and of his accomplishment in the university, acquires a much more definite knowledge as to his adaptability to business and the general field in which he is most likely to succeed. This guidance is presented carefully not with the purpose of choosing for the student, but rather of assisting him to analyze his problem and make a choice for himself.

(d) *Change of Goal.* Students obviously not adapted to the type of work offered, will be definitely and frankly advised to change their goal and type of training. In some instances, this change will necessitate transfer to another institution.

This sevenfold plan of guidance constitutes the chief contribution of the School from the standpoint of helping the student to measure himself and to choose his career. Equally constructive methods are involved from the viewpoint of that educational training which, while helping the student to make his choice more advisedly, will also prepare him to meet more successfully the demands of the business he enters.

ORGANIZATION OF CURRICULA

BASIC COURSES

Analysis of the courses listed in the first two years will reveal those subjects which are deemed a fundamental approach to further specialization in the study of business, from the viewpoint of executive direction and control. They constitute a groundwork for the development of the executive. These courses are prescribed for all students.

Such groundwork is necessary in the first two years because of six fundamental facts:

First, since all students expect to specialize sooner or later in a particular business field, those subjects offered in their first years of college must be of such nature as to equip each student with that groundwork upon which his field of specialization rests. The basic courses required in the first two years are designed to supply that essential equipment.

Second, colleges throughout the country recognize their freshman year as the critical period for students. A large number of young men who have formulated purposes may develop interest in a goal for which they are not preparing specifically or they may change their objective altogether and transfer to an institution which meets their new demands. This transfer should be effected with a minimum loss in time and in subject matter for credit in the college to which the student goes.

Third, educational statistics show that for one reason or another a large percentage of students withdraw after their first or second year, leaving college altogether. These men should receive the highest values possible for such a short period. Hence, broad and underlying principles of administration rather than technical processes should constitute their first two years' study.

Fourth, statistics indicate further that a large percentage of freshmen and sophomores who remain in colleges are groping their way uncertainly toward a career. Their highest welfare demands time and opportunity for exploration in the field of business. Therefore, broad, constructive, vocationally directive courses should characterize their introduction to the study of business administration.

Fifth, while a fair number of sophomores in colleges and universities formulate career decisions before their junior year, numbers of these decisions undergo radical changes before or within the next year. The foundation must be sufficiently broad to allow for that shift in career with a minimum loss in time and value.

Accordingly, a fundamental groundwork, basic to administration in the chief fields of business and industry, should result from their first two years in college.

Finally, accumulated statistics show conclusively that few eminent business men have remained throughout life in the field which marked the beginning of their career. For example, out of fifty of this country's most successful business men, thirty-nine are in fields far different from those in which they began. In other words, about four of every five or eighty of every hundred change their work from once to many times before gaining success. Therefore, a student's background should be broad and deep, enabling him to meet any unusual opportunity in any phase of business presenting itself to him.

Such a background the student finds in the prescribed work of the first two years preceding the period of specialization.

In the light of the foregoing facts, all students will receive a thorough grounding in underlying principles of business administration before final specialization in any of the main divisions of business such as Accounting, Finance, Industrial Management, Marketing, as well as for the specific work of the cost accountant, auditor, office manager, advertising manager, credit man, sales manager, personnel manager, and other executives.

The following outline of the prescribed work in the first two years presents those subjects which are deemed fundamental to specialization in any of the main fields of administration in business and industry.

		FIRST YEAR	
FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles	3	Merchandising Principles	3
Elementary Accounting	5	Elementary Accounting	5
English Composition:		English Composition:	
Exposition	3	Argument and Description . . .	3
Fundamentals of Business Or-		Fundamentals of Business Ad-	
ganization:		ministration:	
Resources and Industries } . .	4	Applied Economics . . . } . . .	4
Business Economics . . . }		Business Administration }	
The Problem Method of Study .	3		
Physical Training	2	Physical Training	2
		SECOND YEAR	
Marketing Problems	3	Marketing Problems	3
Advanced Accounting	3	Advanced Accounting	3
Industrial Finance	3	Industrial Finance	3
Industrial Organization and		Industrial Management	3
Management	3		
Research in Business Adminis-		Research in Business Adminis-	
tration:		tration:	
Business Opportunities	3	Executive Training	3

GENERAL VIEW OF CURRICULA

In presenting outlines of the various curricula open to students, the School calls attention to the fact that such outlines are tentative. In the last two years students specializing in one field may, upon the Dean's approval, elect related courses from any other field.

Business is not static; it never stands still. No curricula can be considered final. They must be elastic because business principles are so, because each field of business permits a broad range of specialization, and because each student has a peculiar approach to his specific field. No curriculum can exhibit the range of study combinations possible for the most intensive specialization.

Each of the four curricula which follow presents in the first two years those subjects deemed prerequisite as a broad, fundamental background to more specialized study. On page 21 appear six primary reasons for prescribing these courses for all students.

In the last two years there are few absolute prescriptions. All students have unrestricted choice of curricula; in fact, under proper conditions, upon approval of the Dean, a student in his third and fourth years, may major in two fields and minor in a third. In these cases, of course, certain prescriptions obtain in order to insure proper coördination and balance of subject matter, since each business field demands intimate knowledge of its particular problems and methods. With equal reason, there are elective subjects which belong more naturally to one field than to another. On the other hand, within each field there is opportunity for so high a degree of specialization that no curriculum can adequately present the possible range of study involved or permissible.

Accordingly, in reviewing the general outlines which follow of curricula in Distribution Management, Industrial Management, Financial Management, and Accounting, the reader should bear in mind that these outlines beyond the second year are suggestive, not final, and that there are other combinations of courses almost equally pertinent.

In the case of students who are uncertain as to the field of their choice, it is suggested that they specialize in Distribution Management because this field represents the largest single field of commercial activity and because it offers an unusually broad range of study.

CURRICULUM I

DISTRIBUTION MANAGEMENT

This curriculum is suggested for those who plan to enter wholesaling, retailing, advertising, salesmanship, or other fields of selling. The basic training in business as a whole is required the first two years; in the last two years specialization is permissible.

Since only a small percentage of students have definite convictions as to the field of business they desire to enter, and since the field of distributing represents the largest single field of commercial activity, it is recommended that most students specialize in Distribution Management. This suggestion is particularly pertinent for those who are uncertain as to their choice.

The most difficult phases of marketing relate logically to problems of selling. These problems were comparatively simple before the introduction of power machinery and the development of mass production. This development made old marketing methods useless in general; large scale, specialized production not only demanded new and larger markets, or more intensive development of existing markets, but also required a thoroughgoing reconstruction of marketing methods. Hence the sweeping revolution in selling organizations and in policies and methods of distribution.

Not only the earlier, time-worn sales methods of manufacturers have been swept away, but retail merchandising and wholesale distribution have undergone and are yet undergoing profound changes in management and in operation.

Despite the fact of reduced distribution costs, complexity of the world's economic structure has increased production costs. A significant problem for marketing, therefore, is that of cost reduction. To reduce cost in manufacturing is not primarily the work of distribution agencies; nevertheless, in order to overcome the handicap of heavy costs, many agencies have assumed the producer's functions. Conversely, many producers have assumed marketing functions in an effort to cut costs. Producer and distributor must now develop greater efficiency in methods, each understanding generally the work of the other.

It is necessary to face unflinchingly the problems of mass distribution no less than of mass production. Chain store operations — chain specialty stores, chain wholesale stores, chain department stores — these highly complex agencies of distribution must be studied with utmost care.

DISTRIBUTION MANAGEMENT

FIRST YEAR

FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles.....	3	Merchandising Principles.....	3
Elementary Accounting.....	5	Elementary Accounting.....	5
English Composition:		English Composition:	
Exposition.....	3	Argument and Description...	3
Fundamentals of Business Or-		Fundamentals of Business Ad-	
ganization:		ministration:	
Resources and Industries } ..	4	Applied Economics. . . . }	4
Business Economics. . . . }		Business Administration }	
The Problem Method of Study.	3		
Physical Training.....	2	Physical Training.....	2

SECOND YEAR

Marketing Problems.....	3	Marketing Problems.....	3
Advanced Accounting.....	3	Advanced Accounting.....	3
Industrial Finance.....	3	Industrial Finance.....	3
Industrial Organization and		Industrial Management.....	3
Management.....	3		
Research in Business Adminis-		Research in Business Adminis-	
tration:		tration:	
Business Opportunities.....	3	Executive Training.....	3

THIRD YEAR

Corporation Finance.....	3	Corporation Finance.....	3
Business Statistics.....	3	Business Statistics.....	3
Advertising Principles.....	3	Advertising Principles.....	3
Retail Store Selling.....	3	Retail Store Selling.....	3
Special Research Problem.....	3	Special Research Problem	3

FOURTH YEAR

Advanced Economic Problems..	3	Advanced Economic Problems..	3
Purchasing Problems(Mercantile)	3	Distribution Management	
		(Mercantile).....	3
Advertising Campaigns.....	3	Advertising Campaigns.....	3
Principles of Psychology.....	3	Applied Psychology.....	3
Special Research Problem	3	Special Research Problem	3

CURRICULUM II

INDUSTRIAL MANAGEMENT

The suggested curriculum in Industrial Management is to give a general executive training and also to afford specialization in the particular field of production.

Students who desire to become managers, assistant managers, or superintendents in industrial concerns, are advised to take this curriculum. The chief aim of this course is to give that broad training in executive management essential to diplomatic, forceful, efficient control of the human factor in industry, as well as of the mechanical phases of manufacturing methods. Scientific management is absolutely necessary: short cuts, motion study, time measurement, quality-quantity production, and other practices and principles. But a knowledge of the human element, a knowledge of psychology, an intimate acquaintance with sociology, are equally important, especially in large organizations.

The first two years, prescribed, provide a broad knowledge of business as a whole. The last two years, providing specialization through elective courses, develop an intimate acquaintance with the physical and personnel problems of industrial management together with a detailed knowledge of control routing, costs, labor problems, industrial organization, sales coördination, related principles and practices.

This curriculum lends itself admirably to a combination of theory and practice, through a large number of field trips to industrial concerns where problems of location, equipment, organization, and management may be profitably surveyed.

INDUSTRIAL MANAGEMENT

FIRST YEAR

FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles	3	Merchandising Principles	3
Elementary Accounting	5	Elementary Accounting	5
English Composition:		English Composition:	
Exposition	3	Argument and Description . .	3
Fundamentals of Business Or-		Fundamentals of Business Ad-	
ganization:		ministration:	
Resources and Industries } . .	4	Applied Economics . . . } . .	4
Business Economics . . . }		Business Administration }	
The Problem Method of Study .	3		
Physical Training	2	Physical Training	2

SECOND YEAR

Marketing Problems	3	Marketing Problems	3
Advanced Accounting	3	Advanced Accounting	3
Industrial Finance	3	Industrial Finance	3
Industrial Organization and		Industrial Management	3
Management	3		
Research in Business Adminis-		Research in Business Adminis-	
tration:		tration:	
Business Opportunities	3	Executive Training	3

THIRD YEAR

Advertising	3	Advertising	3
Business Statistics	3	Business Statistics	3
Factory Management	3	Personnel Management	3
Corporation Finance	3	Corporation Finance	3
Special Research Problem	3	Special Research Problem	3

FOURTH YEAR

Advanced Economic Problems . .	3	Advanced Economic Problems . .	3
Purchasing Problems(Industrial)	3	Distribution Management (In-	
		dustrial)	3
Cost Accounting (Industrial) . .	3	Cost Accounting (Industrial) . .	3
Principles of Psychology	3	Applied Psychology	3
Special Research Problem	3	Special Research Problem	3

CURRICULUM III

FINANCIAL MANAGEMENT

The suggested curriculum in Finance is designed for those students who expect to engage in some phase of commercial or investment banking, or of business finance. It offers opportunities for both general business training and specialization in the fields of banking, finance, investments, and related fields.

After two years of ground work in business fundamentals, this course provides specialization in the problems of organizing and financing business and industrial enterprises: knowledge of the sources of capital, of acquiring capital for organizing or expanding, of banking methods and management, of credit, of failures and bankruptcy and their causes. From the administrative point of view, that is of the bank executive, are presented matters of limitation of activities, organization, personnel, federal reserve system, loan and credit policies, trusts, syndicates.

Particular stress is laid upon the promotion and expansion of corporations, the underwriting of syndicates, and of sound accounting principles, together with their relation to state and federal powers. Logically linked with these problems are those of investment banking, foreign exchange, public utility finance, and municipal financial problems.

This curriculum also involves a study of Bank Administration.

FINANCIAL MANAGEMENT

FIRST YEAR

FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles	3	Merchandising Principles	3
Elementary Accounting	5	Elementary Accounting	5
English Composition:		English Composition:	
Exposition	3	Argument and Description . . .	3
Fundamentals of Business Or-		Fundamentals of Business Ad-	
ganization:		ministration:	
Resources and Industries } . .	4	Applied Economics . . . } . . .	4
Business Economics . . . }		Business Administration }	
The Problem Method of Study . .	3		
Physical Training	2	Physical Training	2

SECOND YEAR

Marketing Problems	3	Marketing Problems	3
Advanced Accounting	3	Advanced Accounting	3
Industrial Finance	3	Industrial Finance	3
Industrial Organization and			
Management	3	Industrial Management	3
Research in Business Adminis-		Research in Business Adminis-	
tration:		tration:	
Business Opportunities	3	Executive Training	3

THIRD YEAR

Monetary Principles	3	Commercial Banking	3
Business Statistics	3	Business Statistics	3
Financial Credits	3	Financial Credits	3
Corporation Finance	3	Corporation Finance	3
Special Research Problem	3	Special Research Problem	3

FOURTH YEAR

Advanced Economic Problems . .	3	Advanced Economic Problems . .	3
Advanced Commercial Banking	3	Advanced Commercial Banking	3
Investment Banking	3	Investment Banking	3
Principles of Psychology	3	Applied Psychology	3
Special Research Problem	3	Special Research Problem	3

CURRICULUM IV

PROFESSIONAL AND MANAGERIAL ACCOUNTING

The field of Accounting probably produces more executive heads of business enterprises today than advance from any other one agency.

With the growth in complexity of business, accountants bulk more and more important in the organization and operation of a successful business enterprise. Increasingly there is a demand for well-trained men, both in the fields of industrial and commercial accounting and in the profession of public accounting.

This curriculum, therefore, while preparing students for accounting positions in large corporations, for public accounting, and ultimately for administrative positions as well, designed more especially for those who desire to become professional accountants, nevertheless provides an excellent background for future administrators.

In this curriculum the background of total business organization is stressed to the utmost. The whole field of accounting is intricately linked with both commerce and industry; constructive accounting has to consider peculiar demands made by various concerns; interpretation of accounts oftentimes depends, not alone upon an accounting principle, but upon a principle of business administration or of business law; the consulting accountant frequently has to formulate or reshape the entire administrative, financial, or marketing policy and programs of a concern about whose particular business he may have known nothing. The fact that many producers and wholesalers have cut down their advertising campaigns and devoted their energies to "dealer help" in matters of accurate accounting of all kinds illustrates the intimate connections of accounting with business.

Accountancy of the highest type demands all those powers commonly assigned to executives: initiative, power of analysis, breadth of view, resourcefulness, sound judgment. The course prepares students with such qualities for the work of the cost accountant, auditor, office manager, advertising manager, credit manager, or sales manager, and also for other executive positions.

ACCOUNTING

FIRST YEAR

FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles. . .	3	Merchandising Principles.	3
Elementary Accounting. . .	5	Elementary Accounting.	5
English Composition:		English Composition:	
Exposition.	3	Argument and Description. . .	3
Fundamentals of Business Or-		Fundamentals of Business Ad-	
ganization:		ministration:	
Resources and Industries } . .	4	Applied Economics. . . } . . .	4
Business Economics. . . }		Business Administration }	
The Problem Method of Study. .	3		
Physical Training.	2	Physical Training.	2

SECOND YEAR

Marketing Problems.	3	Marketing Problems.	3
Advanced Accounting.	3	Advanced Accounting.	3
Industrial Finance.	3	Industrial Finance.	3
Industrial Organization and		Industrial Management.	3
Management.	3	Research in Business Adminis-	
Research in Business Adminis-		tration:	
tration:		Executive Training.	3
Business Opportunities.	3		

THIRD YEAR

Specialized Accounting Systems	3	Specialized Accounting Systems	3
Business Statistics.	3	Business Statistics.	3
Introductory C.P.A. Problems. .	3	Introductory C.P.A. Problems. .	3
Corporation Finance.	3	Corporation Finance.	3
Cost Accounting.	3	Cost Accounting.	3

FOURTH YEAR

Advanced Economic Problems. .	3	Advanced Economic Problems. .	3
Auditing.	3	Auditing.	3
Advanced C.P.A. Problems. . .	6	Advanced C.P.A. Problems. . .	6
Principles of Psychology.	3	Applied Psychology.	3

OTHER CURRICULA

Students desiring to take combinations of courses other than those outlined in the regular curricula may do so, provided their selections meet the approval of the Dean and the hour requirements for the degree.

TWO-YEAR GENERAL BUSINESS CURRICULUM LEADING TO JUNIOR CERTIFICATE

The Two-year General Business curriculum, leading to the Junior Certificate, is planned for those students who cannot pursue the four-year curriculum. Since the basic courses in business administration have been placed in the first two years of all curricula, this special two-year curriculum coincides in the main with the work prescribed for all men in the first two years. However, where desirable, logical elections may be made upon the Dean's approval, particularly in the second year.

FIRST YEAR

FIRST SEMESTER	Recitation hours per week	SECOND SEMESTER	Recitation hours per week
Merchandising Principles.....	3	Merchandising Principles.....	3
Elementary Accounting.....	5	Elementary Accounting.....	5
English Composition: Exposition.....	3	English Composition: Argument and Description.....	3
Fundamentals of Business Or- ganization:		Fundamentals of Business Ad- ministration:	
Resources and Industries} ..	4	Applied Economics.....}	4
Business Economics.....}		Business Administration}	
The Problem Method of Study.	3		
Physical Training.....	2	Physical Training.....	2

SECOND YEAR

Marketing Problems.....	3	Marketing Problems.....	3
Advanced Accounting.....	3	Advanced Accounting.....	3
Industrial Finance.....	3	Industrial Finance.....	3
Industrial Organization and Management.....	3	Industrial Management.....	3
Research in Business Adminis- tration:		Research in Business Adminis- tration:	
Business Opportunities.....	3	Executive Training.....	3

SINGLE COURSES

A single course or combination of courses may be taken by special students who have met the admission requirements for special students (see page 43), and who do not desire to take a full program. The programs of such students must, in each case, be approved by the Dean.

COMBINATION OF DAY AND EVENING COURSES

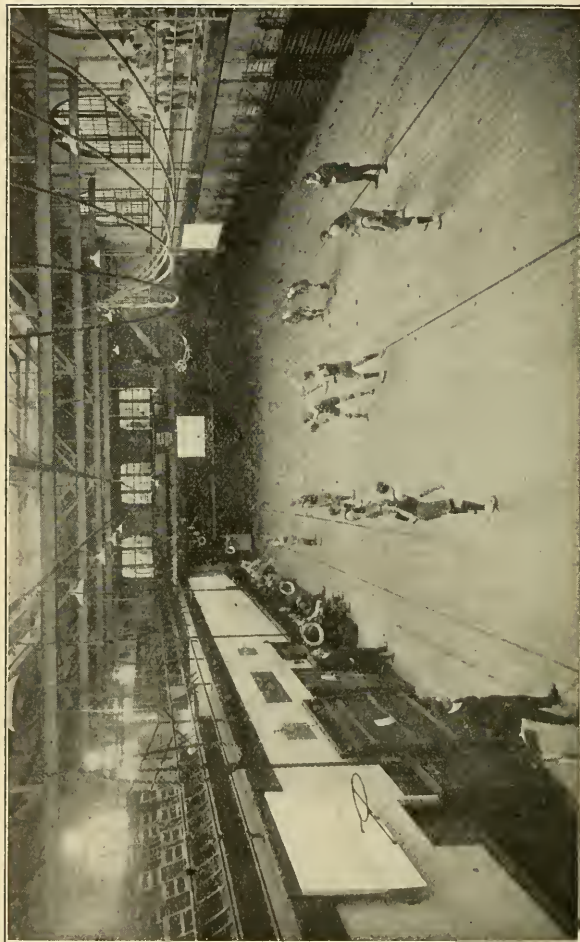
Affiliation with the Evening School of Commerce and Finance permits, in the upper years, an unusually broad range of elective studies for purposes of specialization. Certain courses may be taken in the School of Commerce and Finance, especially those courses of such extremely specialized nature that few day school students would be enrolled in them. In other cases, when practical business experience counts heavily in the instruction, students may be required to take such courses in the evening under teachers who bring their every-day experience to bear on the problems of study.

When students desire a course not offered in the day school but offered in the evening school, if such course meets the requirements as to elective work, permission to take it in the evening must be obtained. In the event of conflict of courses, one course involved may be taken in the evening.

In general, the credit for evening courses will not be identical with that of like subjects in the day school; but in the instance of courses offered only in the evening school and required for the day school students the credit will be given for a full course or a half course in the day school upon completion of a full course or half course as the case may be in the evening school. Each case must meet the approval of the Dean of each school.

ALTERNATION, OMISSION, OR CHANGE OF COURSES

The School reserves the right to alternate, omit, or to change any course or courses offered in any curricula, without formal notification.



MAIN GYMNASIUM

STUDENT ACTIVITIES

The constructive values of wholesome, active, recreational life — social, religious, and athletic— are recognized by the School officials. Students are encouraged to form organizations which will stimulate the best types of activities. In fact, student activities form a natural part of the college life, and add to the student's all-round development much that no mere course of studies alone can give him.

The following list is representative of those activities in which the University encourages students to participate.

ATHLETICS

There are three types of athletic activities under the direction of the University: (1) competitive sports such as baseball, basketball, track, swimming, wrestling, soccer, and tennis; (2) recreational activities which involve but a slight amount of competition and no organized competition, including all phases of gymnastics particularly; (3) and corrective exercises.

1. COMPETITIVE SPORTS

All forms of organized competitive athletics recognized by the University are under the general direction of the Northeastern University Athletic Association. The Athletic Association consists of all students of the Schools of Engineering and of Business Administration.

At the head of the Association is the General Athletic Committee, consisting of certain members of the faculty and the student officers of the Athletic Association, the latter elected from the student body. This committee has charge of the administration of athletics, subject to the approval of the Faculty Committee on Athletics.

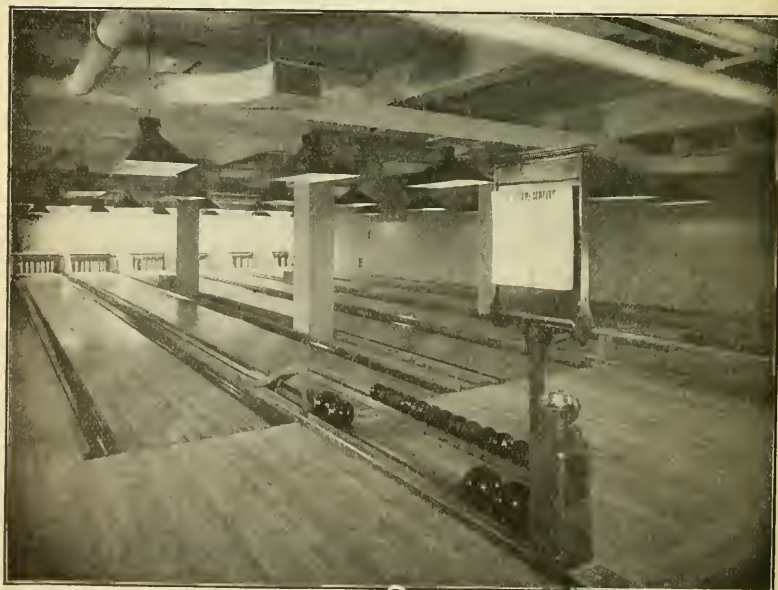
Under the guidance of efficient athletic coaches, track, basketball, and baseball teams are formed. Schedules are arranged with other colleges for home games and games abroad. The association also encourages soccer, wrestling, swimming, interclass baseball, and tennis teams. Interclass and interdivision meets are held during the year.

2. RECREATION AND HEALTH

Physical training is definitely classified as a regular freshman course for which no additional charge is made. It is as much a



SWIMMING POOL



BOWLING ALLEY

part of the freshman year as is any other course, and a passing grade must be made for credit. No unexcused student will be graduated who has not made his credits in physical training.

Recreation and good health are essential to success in the studies of the School and in later business careers. Freshmen, unless on part-time employment, or physically incapacitated, are required to take at least two hours per week of physical recreation, which is provided in connection with the gymnasiums, swimming pool, tennis courts, and other facilities.

Upper classmen are encouraged to make use of these advantages, although physical training is not a required course beyond the first year. There is no charge for participation in organized athletics. In case, however, upper classmen take part in freshman gymnastic exercises or desire other privileges of the Recreation and Health Department, the usual fee must be paid by such student to the department.

3. CORRECTIVE EXERCISES

All freshmen in the School receive one to three thorough physical examinations per year by the University expert. They are then grouped for physical exercise according to their condition.

Where deemed advisable, the School will require that students take a prescribed amount of special, carefully designed physical exercises at regular intervals for the purpose of correcting defects.

SOCIAL LIFE

The social life of the School consists principally of the following activities:

The first is a reception given by the Faculty to the entire student body.

The second is that of class activities. Classes hold regular get-togethers, with cheering, singing, music, jokes, and acquaintance-making. Occasionally the freshman class entertains upper classes; annually, soon after the opening of school, the upper classmen entertain the first-year students, providing one of the most enjoyable occasions of the year.

The third variety of social entertainment is the Freshman Dance. This annual affair, scheduled to occur within the first six weeks of school, affords much enjoyment of the most wholesome sort.

Informal small group dances constitute the fourth variety of social life. These are infrequent, yet sufficient to meet the normal

demands of concerted college life, because many of the students attend dances held by their community groups.

The annual "Junior Prom" constitutes one of the most distinctive functions of the year. This is a formal occasion in which students, faculty, and friends take part.

Perhaps the most distinctive social event of the year consists in Home Folks Day. Most colleges have "get-togethers" of students, but few or none attempt to bring student and family together at the college. Nothing is more helpful to the student than the intimate interest of his father, his mother, his brother, his sister, in his college life. Accordingly once each year the faculty and students devote one day to a series of entertainments in which the Home Folks share. There are dramatic presentations, minstrel shows, athletic contests, speeches, tours of the University buildings and grounds, parlor acquaintances-making, followed by a banquet and later a dance which lasts until midnight. Parents and students are agreed that this occasion is unique in tone, in spirit, in value.

Finally, in order that the utmost informality and cordiality may exist between the administration and the students, the Dean sets aside certain Home Social Hours. He and his family keep open house and cordially invite to their home individual and group visits of students and members of the faculty, at the following hours:

1. From 7.30 to 10.00, during the evening of the first Wednesday of each month.
2. From 3.30 to 6.00, during the afternoon of the fourth Sunday of each month.

THE BULLETIN

The student publication, *The Bulletin*, appears monthly. It ranks high in ideals and influence.

CLUBS

The chief club activities relate to the dramatic club, the orchestra, the glee club, and the band. These constitute an important value in the rounding out of a four-square manhood. All work individually and collectively to further various occasions of the school year, such as dances, entertainments, and Home Folks Day.

FRATERNITIES

At present three fraternities hold charters from the School, operating in a spirit of close coöperation. These fraternities are the Phi Beta Alpha, the Alpha Sigma Phi, and the Kappa Zeta Phi.

Each has a faculty adviser, elected by its members and approved by the School. Each agrees in its charter to foster high scholarship and to develop school loyalty, with especial attention to any member who fails to meet academic or other requirements. No student is eligible for a bid unless his academic record averages at least C—.

The operation of all fraternities is supervised by the Inter-Fraternity Council, composed of two members from each fraternity, the Dean of the School sharing in all deliberations of this body.

HONOR FRATERNITY

There is one Honor Fraternity.

Its purpose is, through its membership determined on the basis of personality, a broad program of activities, and high scholastic standing, to foster high attainment in study and in activities and to develop that high ethical and professional code which increasingly characterizes business men.

RELIGIOUS LIFE

Because of the fact that the School is absolutely non-sectarian and has in its enrolment members of various religious faiths, the program of religious activities has to be and should be very broad and generous. At the same time it must be utterly sincere and non-compromising on broad principles. No part of the religious program is compulsory, or so narrow as to exclude anyone.

The chief agency for organizing and carrying out such a program is the Student Christian Union, organized by and composed of students particularly interested in this type of activities. The Dean of the School acts in an advisory capacity to the Union.

The main purpose of the organization is to develop rational and strong Christian character by bringing students together from the service point of view. Students help one another, in many ways which cannot properly be listed in a catalog, to develop that four-square manhood which is essential to a democratic civilization. The chief functions of the Union, in organized form, are:

(1) Developing leadership through study and participation in School and community activities which demand and develop leadership; (2) assisting new students to find suitable housing accommodations and controlling the housing program of the School; (3) establishing among the students groups to study life problems and leading or finding leaders for these groups; (4) visiting any students who are sick or injured and helping them in every way possible; (5) studying the stress universally laid upon personality and character and fostering programs of self-development from the standpoint of Christian manhood.

TUITION AND OTHER FEES

1. TUITION FEES

First tuition payment, September 21	\$66.25
Second tuition payment, November 18	66.25
Third tuition payment, February 3	66.25
Fourth tuition payment, March 31	66.25
<hr/>	
Total tuition charge	\$265.00

This amount covers all charges made by the School for student activity fees, including athletics, gymnasium and natatorium for freshmen, dramatics, glee clubs, associate membership in the Boston Y. M. C. A. (Certain clubs require in addition a small membership fee.)

2. MATRICULATION FEE.....\$5.00

Payable but once, at times of filing application for initial admission to the School.

3. GRADUATION FEE.....\$10.00

Payable by all seniors on or before April 1.

4. WITHDRAWALS AND REFUNDS

Students who are forced to withdraw from the School are requested to notify the School office in writing to the effect that they are withdrawing and to give their reasons for doing so. This notification should be given promptly.

As the School assumes the obligation of carrying the student throughout the year when the student registers, and as the University provides the instruction and accommodations on a yearly basis, the Executive Council of the University has ruled as follows:

A. Applications for refunds must be presented within sixty days after withdrawal from the School.

B. Credits and refunds will be granted only as stated below:

1. The unused portion of the tuition paid by the applicant may be placed in suspense and used at some future time to apply upon the tuition of any school in Northeastern University. This is done, provided the reasons set forth in the application meet the approval of the Com-

mittee on Refunds, and on the further condition that the credit be used within two years.

2. Cash refunds of unused portions of tuition paid by the student may be granted only in cases when students are compelled to withdraw on account of personal illness. The application must be accompanied by a satisfactory certificate from the physician.

In the event of withdrawal after initial application for admission has been filed, no refund is made of the five-dollar matriculation fee.

ADMISSION TO THE SCHOOL

ADMISSION REQUIREMENTS

I. REGULAR STUDENTS

An applicant for admission as regular student in candidacy for the Bachelor of Business Administration (B.B.A.) degree must meet the following requirements:

- (a) He must furnish satisfactory credentials showing that:
 - 1. He is a graduate of an approved high school or school of equal grade, *or*
 - 2. He has completed satisfactorily fifteen units of secondary school work in such a school, *or*
 - 3. He must satisfactorily pass entrance examinations covering fifteen units of secondary school work.
- (b) He must be of satisfactory character.
- (c) He must satisfy the Committee on Admission through interview and a personnel analysis, or by such other means as the Committee may deem desirable, of his general fitness to undertake the work of the School.

II. SPECIAL STUDENTS

A special student, who is not a candidate for the B.B.A. degree, may be admitted to the School at the discretion of the Committee on Admission, provided he meets the following requirements:

- (a) He must be at least twenty-one years of age.
- (b) He must have had some business experience.
- (c) He must give satisfactory evidence of his general fitness to undertake the work of the School.

Those admitted as special students cannot become candidates for the B.B.A. degree unless at the time of admission they met all requirements for entrance as a candidate for the degree.

Only a limited number of special students will be admitted in any one year.

III. PART-TIME STUDENTS

Under exceptional circumstances regular students may be permitted to take less than a complete program. Work taken in this manner will be credited toward meeting the requirements for the degree.

IV. ADVANCED STANDING STUDENTS

Students who have successfully completed regular courses of instruction in a school of business administration of a recognized

college or university may receive not exceeding three years' advanced standing credit upon presentation of a satisfactory certificate showing the courses completed. Admission is open in the fall and at mid-year.

REGISTRATION

Registration involves two steps:

1. *Filing Application for Admission to the School.* An applicant for admission should file a formal application as soon as he has decided to seek entrance to the School. The blank at the close of this catalog may be used for this purpose. Additional blanks may be obtained from the School office. The early filing of the application renders it possible to adjust matters affecting the student's status in advance of the opening date of School, and is highly desirable both from the standpoint of the student and that of the administration. Applications may be filed through the mail; or personally, the applicant calling at the School. A five-dollar matriculation fee is payable when the application is filed.

2. *Formal Registration.* Formal registration consists in reporting at the School office on the registration date (see page 2 of the catalog) and filling out the required forms. At this time the Dean, or a member of the faculty, will interview each student and so far as possible adjust all matters with regard to his status.

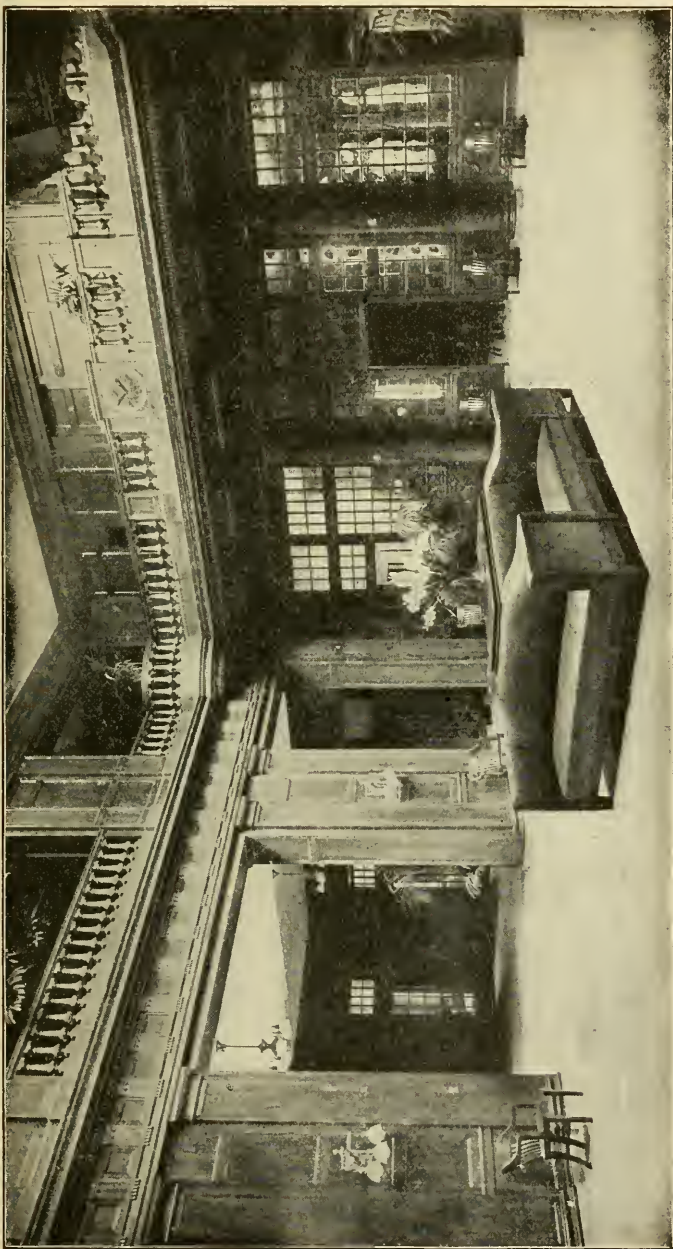
In case the applicant has not filed his application for admission prior to the date of registration he may do so at this time.

LATE REGISTRATION

In exceptional circumstances students may be permitted to register after the opening date of School, provided they have not lost so much work as to render admission to the School inadvisable. Business principles dictate that students should by all means avoid late registration. Students registering a week or more late must pay a post-registration fee of \$5.00.

MID-YEAR REGISTRATION

Under certain conditions, applicants for entrance at mid-year may be admitted, especially in the case of (1) students applying for advanced standing, (2) students who have graduated from high school at the mid-term, and (3) special students. Should those in the first two groups complete the requirements for graduation at some succeeding mid-term, they would be nominally graduated, but would not formally receive the degree until the June following.



LOBBY

RULES AND REGULATIONS

THE MARKING SYSTEM

The following system of grading the results of a student's work has been adopted by the School:

- A 90%—100% Excellent
- B 80%—89% Good
- C 70%—79% Fair
- D 60%—69% Passed (provided the number of D grades does not exceed 30% of the student's total number of grades).
- F below 60% Complete failure: one reëxamination permissible; if this is failed the course, if prescribed, must be repeated; if elective, may be repeated or may be replaced by a closely related subject, on approval of the Dean.

In addition to attainment so far as the content of the course is concerned, individual ability will be taken into account and each student will be expected not only to secure passing marks in his courses, but also to do that grade of work which it is reasonable to expect from his particular ability. In other words, if a student has the ability to do A work, but actually does only C work, he is obviously not achieving what he should. In such a case, the faculty will exercise every effort to encourage and elicit that type of work commensurate with the student's ability.

EXAMINATIONS — TERM WORK

1. Mid-year examinations will be given in all courses during the week following the close of the first semester. In the case of half-year courses the mid-year examinations will be the final examinations. Class sessions are omitted during the examination period.

2. During the two weeks following the close of the second semester, final examinations will be given in each course, excepting those which were concluded the first semester.

3. All of the required term work in certain courses must be completed and submitted before the student may take the mid-year or final examination in the course.

REEXAMINATIONS

Students who receive a grade below 60% in a course will be permitted to take a reëxamination in the course the following September. If a student fails in the reëxamination he must, if the course is prescribed, repeat the course; if he passes he will be credited with a final grade of 60% in the subject. The fee for each reëxamination is \$3.00.

A reëxamination cannot be taken to raise a grade.

PROMOTION AND CLASSIFICATION OF STUDENTS

Classification in, and promotion to, the various classes of the School is dependent upon the attainment of the credit indicated below in each case:

For sophomore standing

(with freshman conditions) . . . 15½ hours credit

For junior standing

(with sophomore conditions) . . . 27 hours credit

For senior standing

(with junior conditions) . . . 42 hours credit

REPORTS OF STUDENTS' PROGRESS

Reports of students' progress are issued regularly four times in each school year: the first of December, February, April, and June. The School will also be glad to furnish parents or students, at times other than the dates upon which regular reports are tendered, full information with regard to status. In event the work of a student is unsatisfactory, the School will notify both the student and his parents of the fact, and will attempt to discover and eliminate the causes.

ATTENDANCE REQUIREMENTS

The following are the rules relating to attendance:

1. Students are allowed not to exceed six unexcused absences in a three-hour course which runs throughout the year; and not to exceed three unexcused absences in a three-hour course which runs for one semester only.
2. Satisfactory excuses must be tendered for each absence in excess of the maximum of unexcused absences. In case absences are due to personal illness a physician's certificate should be left at the school office.

3. Five per cent will be deducted from the original grade of a student in a course for each unexcused absence in excess of the total number allowed for that course.
4. Students who are more than five minutes late in entering a class or who leave class five minutes early will be marked absent.

REQUIREMENTS FOR THE B.B.A. DEGREE

A candidate for the Bachelor of Business Administration degree must satisfy the following requirements:

- (a) He must have met all of the admission requirements and have been admitted to the School as a regular student in candidacy for the degree.
- (b) The unit of credit is the "hour"; for example, a course pursued three times a week throughout the year would give three hours' credit, a course two times a week throughout the year, two hours' credit, etc. A laboratory period of two hours shall regularly count as one hour's credit toward the degree. Under certain exceptional circumstances laboratory work may count hour for hour as credit toward the degree. A student to be eligible for the degree must complete courses which will allow him the following minimum credit:

First year	. . . . .	18½ hours
Second year	. . . . .	15 hours
Third year	15 hours
Fourth year	15 hours

Total required for degree	63½ hours
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Credit for a course implies the completion of the term work in the course with a grade of at least D and the securing in the final examination of the course of a grade of at least D, except that 70% of the total number of courses must be passed with the minimum grade of C.

- (c) He must meet the attendance requirements of the School. (See above.)
- (d) He must have had at least 30 weeks of practical business experience before the degree is granted. This business experience may be obtained by work pursued during the summer vacations.

REQUIREMENTS FOR THE JUNIOR CERTIFICATE

To secure the Junior Certificate a student must satisfy the following requirements:

- (a) He must have met all of the admission requirements of students who are admitted to the School as candidates for the B.B.A. degree.
- (b) He must complete courses which will allow him the following minimum credit:

First year	. . . . .	15 hours
Second year	. . . . .	15 hours
Total required		30 hours
- (c) He must make the required attendance upon class sessions.
- (d) He must have had at least fifteen weeks' business experience before the Certificate is granted. Students will be able to meet this requirement during the summer vacations between the first and second years of the course.

PART-TIME EMPLOYMENT REGULATIONS

Students doing part-time work may be required to carry fewer courses. Any student whose employment distinctly lowers his performance in study, as exhibited in the academic reports, will be required to drop either his employment or a part of his college work. During the freshman year no student who can possibly afford should attempt heavy part-time employment. Statistics show conclusively that this division of time and energy almost invariably results disastrously. It is far wiser to continue schooling at least one year more than to dissipate one's energies and thought.

CONDUCT

It is assumed that students come to the School for a serious purpose, and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building, or to any of the furniture, or other property of the School, the damage will be charged to the student, or students, known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the School.

Students are expected to behave with decorum, to obey the regulations of the School, and to pay due respect to its officers. Conduct inconsistent with the general good order of the School, or persistent neglect of work, if repeated after admonition, may be followed by dismissal, or, in case the offense be a less serious one, the student may be placed upon probation. The student so placed upon probation may be dismissed if guilty of further offense.

It is desired to administer the discipline of the School so as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present, as his own, any work which he has not performed, or to pass any examination by improper means, is regarded as a most serious offense, and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

GENERAL INFORMATION

BUILDINGS

The school is housed primarily in the buildings of the Boston Young Men's Christian Association, which are the finest structures of their kind in America. In addition it leases a part of the Huntington Building, adjoining Symphony Hall.

The buildings are located on Huntington Avenue, in the section of Boston noted for its institutions of learning. The schools and colleges within their vicinity have an annual attendance of fifteen thousand students. The location is easily accessible from all parts of the city and suburbs, and is practically free from distracting influences.

The impression one gains from looking at the buildings (240 x 200 x 90 feet) from the front is that of one large structure. As a matter of fact, however, there are six buildings, each on its own foundation. With the exception of the front and west side, the buildings are comparatively low, connected by corridors and bridges. This arrangement provides exceptionally fine light and air to all of them.

The six buildings are as follows: Administration, Assembly Hall, Recitation, Natatorium, Gymnasium, and Vocational.

ADMINISTRATION BUILDING

In the Administration building, besides various offices, there are libraries, class rooms, reading and social rooms.

ASSEMBLY HALL

The Jacob P. Bates Hall has a seating capacity of five hundred. A large stage, suitable for entertainments of all kinds is available. The hall is equipped with a motion picture machine. The regular assembly exercises and the lectures of the school are held here.

RECITATION BUILDING

The Recitation building is 196 feet long and 58 feet wide and six stories high. In the basement are the heating and ventilating plants. The first floor is taken up with game, social and club rooms, and a small assembly hall seating one hundred and fifty. On the second and third floors are located class rooms. The fourth floor contains a science lecture room completely equipped, a physics

laboratory, three chemical laboratories, three drafting rooms, two recitation rooms, and department offices. The fifth and sixth floors are used as dormitories.

NATATORIUM.

This building is located between the Assembly Hall and the Gymnasium, and is easily accessible from the locker rooms of the latter. The swimming pool is 75 feet long by 25 feet wide, and is under a glass roof, admitting floods of sunshine. The pool is supplied with filtered salt water from an artesian well, and is heated to the proper temperature by an elaborate system of pipes. Altogether the Natatorium is one of the finest of its kind.

GYMNASIUM

This structure is known as the Samuel Johnson Memorial Gymnasium, the funds of which were provided by the relatives of the late Samuel Johnson. The gymnasium provides the following facilities: three gymnasiums, a twelve-lap running track, two large exercise rooms, boxing and wrestling rooms, handball and squash courts, bowling alleys, showers, steam baths, massage rooms and electric cabinet baths.

The School of Business Administration occupies well-appointed and well-lighted class rooms, and has the use of the library, reading room, parlors, gymnasium, swimming pool, and other facilities. In fact the Y. M. C. A. buildings afford the students those exceptional advantages accruing from an advantageous location in the heart of an educational community.

OUTDOOR FACILITIES

The outdoor facilities are exceptional for an urban university. Adjoining the buildings is a large field equipped for athletics: with four tennis courts, outdoor gymnasium, handball court, basketball courts, jumping pits, board track, cinder track with a hundred-yard straightaway, and baseball and football fields.

LIBRARIES

1. The General Libraries of Northeastern University and of the Boston Y. M. C. A., consisting of several thousand carefully selected volumes. In these libraries the students of the School have available for their use necessary books on business adminis-

tration and allied subjects, together with current business periodicals and the leading business services. The reading room of the library is open from 9.00 A.M. to 10.00 P.M. daily.

2. The Boston Public Library. All members of the School, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the library for general reference and study. Inasmuch as this is one of the best in the country, it presents unusual opportunities to the students. Within a few minutes' walk from the School, it enables students to have unlimited reference at any time to books and periodicals bearing upon business subjects.

RESIDENCE

It is much more satisfactory for students to live within easy access of Boston. The saving of time and effort more than offsets any increased expense.

There are limited accommodations at very moderate rates in the dormitories of the Y. M. C. A. Rooms may be had separately or in groups, with a common reception room. The price varies from \$2.25 per week upwards. Since board costs about \$8.00 per week, a student may obtain room and board for from \$10.25 per week upwards.

Though not required, residence in Boston is advantageous, since thereby the student gains the opportunity of using the college facilities outside of class hours, of conferring readily with his instructors, of more intimately sharing in the activities of college life.

The School officials have no jurisdiction in the matter of dormitory assignments. Students should write the House Secretary of the Boston Y. M. C. A. for rooms in the dormitories.

A registry of suitable rooms in the near-by houses is maintained for the convenience of students desiring accommodations outside the dormitories.

NORTHEASTERN UNIVERSITY CLUB

The Northeastern University Club of Boston was organized in the spring of 1921 with graduates of the School of Law, Commerce and Finance, and Engineering, as charter members.

The purpose of the Club is to promote social activities among the alumni of Northeastern University; to perpetuate the Northeastern spirit in the business life of the community; to give to their

Alma Mater the benefit of the experience of the alumni in the School and of their experience in business and professional activities since their graduation.

Any man of good character, twenty-one years of age or over, who is a graduate of any of the Schools of Northeastern University, granting a degree, or who has attended such schools for a period of two full years, is eligible for membership.

HISTORY OF NORTHEASTERN UNIVERSITY

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896, that the actual foundations for the University were laid. The larger number of courses offered require a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree-granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering was opened in 1909 and given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, and Bachelor of Chemical Engineering. The School of Business Administration was opened in September, 1922, and has the right to grant the degree of Bachelor of Business Administration. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, the Automotive School, and the Vocational Institute are conducted under the administration of the University. In March, 1923, the University was granted general degree-granting power by the Massachusetts Legislature. Divisions of the University offering evening instruction have been established at Worcester, Springfield, New Haven, and Providence.

ROSTER OF STUDENTS

CLASS OF 1926

Name	Home Address
William J. A'Hearn	Dorchester
Edward J. Bacigalupo	Somerville
Francis J. Campbell	Boston
Theodore Crawford	Allston
Richard V. Ewer	Jamaica Plain
George R. Fennell	Everett
John E. Johnson	Maynard
Andrew H. King	North Dartmouth
Roger C. Lummus	Lynn
Ellis C. Maxcy	Gardiner, Maine
Raymond L. Nelson	Farmington, Conn.
Edward A. O'Brien	Worcester
William J. Reedy	Cambridge
Robert A. Rodd, Jr.	Watertown
John E. Ryan	Brighton
Gordon J. Stewart	Dorchester
Morton A. Wienert	Taunton

CLASS OF 1927

Name	Home Address
Albert Baxt	Dorchester
George Melvin Bean	White River Junction, Vt.
George Oscar Bond	Hyannis
Alfred Sumner Bradford	Biddeford, Maine
Irving A. Brown, Jr.	Taunton
Matthew Walter Brown	Cohasset
Benjamin Davis Carpenter	Richford, Vt.
Ray Chen	Boston
Frederick Vernon Chipman	Dorchester
Daniel James Conway	Shrewsbury
Harry Anthony Cortazze	Revere
Grant F. Cotton	Melrose
Arthur Robert Crawford	Barre, Vt.
Joseph R. Critchett	Rockport
Warner Curtis Danforth	Woburn
Edward Philip Dee	Concord

Name	Home Address
Michael Di Bona	Quincy
Leo Joseph Dionne	Winchendon
William Francis Donovan	Natick
Neiland John Douglas	Beverly
Thomas Henry Downey	Boston
Arthur Lewis Eldridge	Dorchester
Philip Epstein	Roxbury
Alfred Ewer	Jamaica Plain
William Falk	Dorchester
William Stanley Ferguson	Wollaston
Kuo Bin Fong	Boston
John Augustine Fulham	Winthrop
John G. Garabedian	Worcester
John Joseph Gervais	Lowell
William Gregory Grady	Medford
Hyman Greenstein	Dorchester
Paul Randolph Hatch	New Milford, Conn.
Joseph F. Hughes, Jr.	Malden
William Edward Jeffrey	Salem
Joseph Kruger	Roxbury
Henry W. Lawson	Bristol, Conn.
Arthur Clifton Leavitt	Natick
Kenneth Lloyd Moir	Arlington
Warren Helge Nelson	Lowell
Samuel S. Nemser	Dorchester
Saul Oscar Nessen	Boston
Joseph Augustus Porter	Hyde Park
Willis Deming Quimby	Lynn
John E. Rich	Isle au Haut, Maine
Edward Rogovin	Malden
Paul Emile Roy	Nashua, N. H.
Leo Sadow	Boston
Herbert Haskell Sargent	Dorchester
Warner Benjamin Scribner	St. Johnsbury, Vt.
Victor Albert Shiff	South Duxbury
Hensley Gardner Smith	Medford
Hyman H. Steinberg	East Boston
Elmer Swanson	Lynn
Leonard Francis Tetreault	Natick
Thomas Joseph Tierney	Winthrop
Frederick M. Waller	Gaylordsville, Conn.
Hollis E. Wilde	Natick

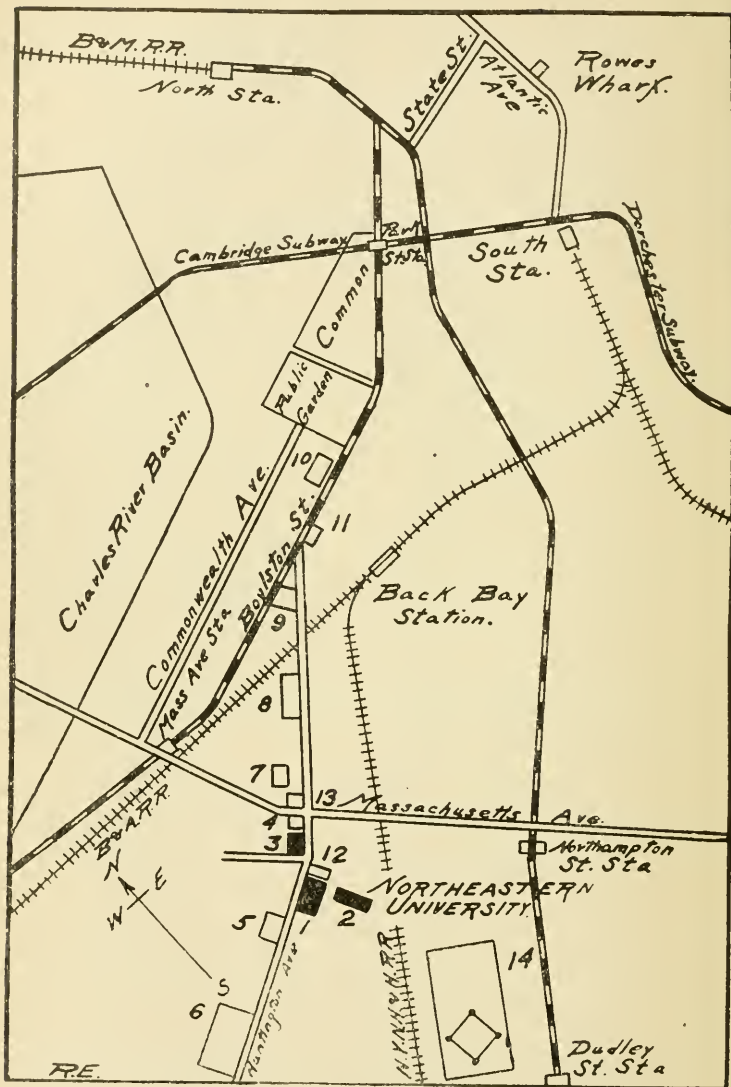
CLASS OF 1928

Name	Home Address
Chester Joseph Allen	Meredith, N. H.
Joseph Francis Audano	East Boston
Max Murray Baker	Beverly
Burrell Burnett Berrie	Auburn, Maine
Leon John Biagi	Boston
John Robert Blair	Everett
Winston Andrew Blake	Haverhill
John Edward Bobula	Jamaica Plain
Marshall Lewis Bosworth	Winchendon
Hyman Brickle	Dorchester
Frederick Russell Bridges	West Roxbury
John W. Burke	Somerville
Harold Columbus Caliri	Lawrence
Raul Catala	Cuba
Howard Raymond Conley	Whitman
Max Cornblatt	Dorchester
Edgar Payne Crowell	Melrose
Archie Charles Cummings	Winthrop
Joseph Daniel Dailey	Jamaica Plain
George Davenport	Brighton
Sydney S. Deutch	Dorchester
Harry Devorin	Roxbury
Abraham Samuel Doxer	Dorchester
John Francis Eaton	Utica, N. Y.
Benjamin Mann Ellison	Quincy
Joseph Falk	West Somerville
Stanley R. Frank	Roxbury
Harold Allan Fraser	Lowell
Chester Fredberg	Roxbury
Charles Garniss	Melrose
A. Wallace Gendron	Winchendon
Paul Emile Gendron	New Bedford
Samuel Granetz	Lawrence
Allen LeRoy Graves	Melrose
Lawrence Watkins Graves	Walpole, N. H.
Charles S. Gurney, Jr.	Wareham
Joseph John Hammer	Danbury, Conn.
Edmund Arthur Hopkins	Allston
Joseph Francis Hughes, Jr.	Malden
Abraham Harold Josephson	Boston

Name	Home Address
Samuel Josephson	Boston
Gerald Francis Keenan	Mattapan
John Francis Kelligrew	Dorchester
Charles William Kesselman	Roxbury
Philip Francis King	East Boston
Gordon Phelps Knowles	Melrose
William F. Kobera, Jr.	Westfield
Allen Arthur Levitov	Roxbury
Leo Sylvester Marcotte	Woodstock, Vt.
Daniel Francis Marr	Dorchester
Willard Gordon Martin	Dorchester
Douglas Matheson	Bridgeport, Conn.
Gordon McCaskill McMullin	Newton Highlands
Sewell O. Merrill	Watertown
Leo Michelson	Dorchester
Henry Nelson Miner	North Attleboro
Frederic Jerome Mullen	Dedham
Richard Leonard Murphy	Dorchester
Henry H. Nadell	Revere
Erving Bernard Osgood	Revere
Samuel Fernald Parker	East Lynn
Oscar George Pearson	Lynn
Daniel Martin Pender	Ayer
Aldo Raffa	West Somerville
Harvey Nelson Raymond, Jr.	Jamaica Plain
A. Lloyd Reed, Jr.	Northeast Harbor, Maine
Dudley Park Rhodes	Waban
Russell Irving Rhodes, Jr.	North Attleboro
Abraham David Risman	Medford
Leonard Sampson	Fall River
Edward Adolph Schatz	Dorchester
Benjamin Snyder	Roxbury
Nathaniel Hawthorne Sperber	Winthrop
Joseph Steinberg	Cambridge
Russell MacConnell Stokes	Melrose
Owen Stoner	Atlantic
Prasart Sone Sukhum	Siam
Edward F. Sullivan	Auburndale
Gerald R. Tatton	Medford
Raymon D. Tellier	Lowell
Stanley N. Thomas	Green Harbor

Name	Home Address
Humbert Francis Ventre	East Weymouth
Leo Francis Volk	Dedham
Edward F. Wales	Newton Center
James Watt, Jr.	Easton
Frank Richard White	Dover
Rodney E. Whittemore	West Somerville
Harold Edward Wing	Lynn
William L. G. Wolff	Milton
Samuel Zitter	Dorchester

HOW TO GET TO NORTHEASTERN UNIVERSITY



MAP OF IMMEDIATE VICINITY

(For key, see next page)

1. From South Station or North Station, go to Park Street by Subway and take any Huntington Avenue car to Gainsboro Street.
2. From Back Bay Station, go to Huntington Avenue; take southbound car to Gainsboro Street.

NORTHEASTERN UNIVERSITY

1. BOSTON Y. M. C. A.
Main Building, Northeastern University
2. VOCATIONAL BUILDING
3. HUNTINGTON BUILDING
4. SYMPHONY HALL
5. BOSTON OPERA HOUSE
6. BOSTON MUSEUM OF FINE ARTS
7. CHRISTIAN SCIENCE CHURCH
8. MECHANICS EXHIBITION HALL
9. BOSTON PUBLIC LIBRARY
10. MUSEUM OF NATURAL HISTORY
11. TRINITY CHURCH
12. NEW ENGLAND CONSERVATORY OF MUSIC
13. HORTICULTURAL HALL
14. NORTHEASTERN ATHLETIC FIELD

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If desiring further information only, use other side.

Matriculation fee of \$5.00 must accompany the application.

APPLICATION FOR ADMISSION

Date.....

Northeastern University
School of Business Administration
316 Huntington Avenue, Boston, Massachusetts

Gentlemen:— I hereby respectfully apply for admission to the
School of Business Administration, for the academic year
19.....-19, and submit the following data:

Name in full.....

Residence..... Street

Town.....

State..... Tel.....

Date of Birth..... Age.....

Father's or Guardian's Name.....

Father's or Guardian's Address.....

Graduate of..... High School. Year.....

Location of High School.....

If not a graduate, how many years were you in High School?.....

How many units toward graduation have you received?.....

When did you leave?.....

Why did you leave?.....

Name of Principal?.....

If employed since graduation, what is the name of your employer?.....

Employer's Address.....

Names and addresses of two other persons to whom we may direct inquiries concerning you.
.....
.....
.....

If admitted to the school, do you plan to complete the full four years' curriculum and qualify for the degree?.....

What curriculum do you wish to concentrate in?.....

Where do you expect to live during the school year?.....

In applying for admission use other side.

Northeastern University
School of Business Administration
316 Huntington Avenue, Boston, Massachusetts

To the Dean:— Please send me detailed information concerning the.....curriculum listed on page.....of your catalog.

I should like further information on the following points:

I have completedyears of high school. Age.....

Name in full.....

Street and number

Town.....

State.....

NORTHEASTERN UNIVERSITY

DAY SCHOOLS

SCHOOL OF ENGINEERING.—Four-year courses in Civil, Mechanical, Electrical, Chemical, and Administrative Engineering, leading to the degrees of Bachelor of Civil, Mechanical, Electrical, Chemical, and Administrative Engineering. Conducted in coöperation with engineering firms. Students earn while they learn. Work conducted at Boston.

SCHOOL OF BUSINESS ADMINISTRATION.—Four-year course in Business Administration leading to the degree of Bachelor of Business Administration. Students may specialize in Industrial Management, Marketing, Finance, Accounting, and Sales Management. A two-year course leading to a Junior Certificate. Work conducted at Boston.

EVENING SCHOOLS

SCHOOL OF LAW (co-educational).—Four-year course leading to the degree of Bachelor of Laws. Preparation for bar examinations and practice. High scholastic standards. A much larger percentage of graduates pass bar examinations than of any other evening law school in New England. Work conducted at Boston, and in Divisions at Worcester, Springfield, and Providence.

SCHOOL OF COMMERCE AND FINANCE (co-educational).—Four-year courses in Professional Accounting, Marketing, and Business Administration, with specialization in banking, finance, insurance, and other fields, leading to the degrees of Bachelor and Master of Commercial Science. Special two-year courses for those desiring intensive specialization. Work conducted at Boston, and in the Divisions at Worcester, Springfield, Providence, and New Haven.

NON-COLLEGIATE SCHOOLS (Evening Polytechnic School).—Three-year courses offered in the Evening Polytechnic School lead to a diploma in Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemistry or Structural Engineering. The work offered in these courses, while not as extensive as that leading to a degree, meets standard requirements. Students are trained for positions of trust and responsibility.

NORTHEASTERN PREPARATORY SCHOOL.—Courses in usual high school subjects leading to a diploma. Three sixteen-week terms each year. It is possible for students to meet college entrance requirements in from three to five years. Work conducted at Boston and in Divisions at Worcester, New Haven, and Providence.

NORTHEASTERN AUTOMOTIVE SCHOOL.—Courses in all phases of the automotive industry with special instruction for owners, salesmen, mechanics, and chauffeurs. Classes are conducted both day and evening.

VOCATIONAL INSTITUTE.—A diversified program of short intensive courses in Blueprint Reading, Public Speaking, Practical Trade Mathematics, Mechanical Drawing, Estimating, Civil Service, English for Educated Foreigners, etc.

For further information concerning any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts



NORTHEASTERN & UNIVERSITY &

SCHOOL OF LAW

(EVENING SESSIONS)



CO-EDUCATIONAL

TWENTY-EIGHTH YEAR

1925 - 1926

BOSTON YOUNG MEN'S CHRISTIAN ASSOCIATION
316 HUNTINGTON AVENUE
BOSTON, MASSACHUSETTS

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Four-year courses in Civil, Mechanical, Electrical, and Chemical Engineering, leading to the degrees of Bachelor of Civil, Mechanical, Electrical, and Chemical Engineering. Conducted in co-operation with engineering firms. Students earn while learning. Work conducted at Boston.

SCHOOL OF BUSINESS ADMINISTRATION

Four-year course in Business Administration leading to the degree of Bachelor of Business Administration. Students may specialize in Industrial Management, Marketing, Finance, Accounting, and Sales Management. A two-year course leading to a Junior Certificate. Work conducted at Boston.

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SCHOOL OF LAW

(Co-educational)

Four-year course leading to the degree of Bachelor of Laws. Preparation for bar examinations and practice. High scholastic standards. A much larger percentage of graduates pass bar examinations than of any other evening law school in New England. Work conducted at Boston, and in Divisions at Worcester, Springfield, and Providence.

SCHOOL OF COMMERCE AND FINANCE

(Co-educational)

Four-year courses in Professional Accounting, Marketing, and Business Administration, with specialization in banking, finance, insurance, and other fields, leading to the degrees of Bachelor and Master of Commercial Science. Special two-year courses for those desiring intensive specialization. Work conducted at Boston, and in the Divisions at Worcester, Springfield, Providence and New Haven.

NON-COLLEGIATE SCHOOLS

EVENING POLYTECHNIC SCHOOL

Three-year courses in Civil, Mechanical, Electrical, Chemical, and Structural Engineering leading to a diploma. Trains men for positions of trust and responsibility. Work conducted at Boston, and in the Divisions at Worcester, Springfield and New Haven. In the Divisions the school is known as the Evening Engineering Institute.

NORTHEASTERN PREPARATORY SCHOOL

Courses in usual high school subjects leading to a diploma. Three sixteen-week terms each year. It is possible for students to meet college entrance requirements in from three to five years. Work conducted at Boston and in Divisions at Worcester, New Haven, and Providence.

NORTHEASTERN AUTOMOTIVE SCHOOL

Courses in all phases of Automotive industry with special instruction in Principles, Advanced Repair, Ignition, Battery, Upholstering, and Driving. Courses designed for owners, salesmen, mechanics, and chauffeurs.

VOCATIONAL INSTITUTE

A diversified program of short intensive courses in Blueprint Reading, Public Speaking, Practical Trade Mathematics, Mechanical Drawing, Estimating, Civil Service, English for Educated Foreigners, etc.

For further information concerning any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts

NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

1925 - 1926



EFFECTIVE METHODS OF INSTRUCTION
HIGH SCHOLASTIC STANDARDS
SOUND PROFESSIONAL IDEALS

Northeastern University of the Boston Young Men's Christian Association
is incorporated under the laws of Massachusetts and is located in
Boston. Divisions are conducted in the Young Men's
Christian Associations at Worcester, Springfield,
Providence, and New Haven

CALENDAR

1925	September 9	Registration Commences
	September 9	Senior Class Lectures Begin
	September 9-15	Entrance and Condition Examinations
	September 14	Junior and Sophomore Class Lectures Begin
	September 21	Other Class Lectures Begin
	October 12	Columbus Day
	November 16	Payment of second instalment of tuition due
	November 26	Thanksgiving Day
	December 22 to December 28 both dates inclusive	Christmas Recess
1926	January 1	New Year's Day
	January 15	Payment of last instalment of tuition due
	February 22	Washington's Birthday
	April 19	(Patriots' Day in Massachusetts)
	May 30	Memorial Day
	June 20	Baccalaureate Address
	June 21	Commencement

CONDITION EXAMINATIONS, 1925

Wednesday, Sept. 9	Criminal Law, Real Property, Corporations
Thursday, Sept. 10	Torts, Equity I, Property II (Deeds)
Friday, Sept. 11	Agency, Personal Property, Bankruptcy
Monday, Sept. 14	Contracts, Bills and Notes, Equity II
Tuesday, Sept. 15	Sales, Wills

Examinations must be taken at the time scheduled, as no special examinations will be given.

OFFICE HOURS

September 1-June 1	Daily (except Saturdays and Sundays), 8.45 a.m.-9.30 p.m.
	Saturdays, 9 a.m.-1 p.m.
June 1-September 1	Daily (except Saturdays and Sundays), 9 a.m.-4 p.m.
	Saturdays, 9 a.m.-12 noon.
	Mondays, 6.30 p.m.-9 p.m.

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THE SCHOOL OF LAW

THE STUDY OF LAW

With the growing complexity of American civilization due to an unparalleled development in commerce and industry has come an increased demand for men who are well trained in the law and who combine with the knowledge of law the highest type of ideals and the best legal ethics.

The law treats of nearly every phase of human relationship. It prepares a student to deal effectively with men and affairs; it trains him to think, to think straight, to think a proposition through to the end and then to act in accordance with judgment based on a clean-cut, unbiased analysis of the facts. This habit of analytical thinking and judicial action is indispensable to the practitioner of law. It is equally indispensable to business men, those in political life, and to all who would render the most efficient service to society.

A large number of the most successful men in nearly every field of activity have had a training in law; and the demand for such men is constantly increasing and will continue to increase with the economic and social evolution of the country.

Law Schools have rendered an inestimable service in the past; they will render an even greater service in the future. From the law schools of to-day must come the leaders of to-morrow. Justice is the keystone of the arch of modern civilization—the lawyer, as an officer of justice, is charged with the preservation and maintenance of all that is true and noble in human society.

“Above all, a lawyer will find his highest honor in a deserved reputation for scrupulous fidelity to private trust and public duty, with the vigor and openness of an honest man and a patriotic and loyal citizen.” (Canon of Professional Ethics, Massachusetts Bar Association.) Law Schools must devote themselves to training lawyers who, either in the profession or in other fields of activity, will be efficient and effective in the actual business in which they are engaged, and who will have as ideals in their work, justice and service to mankind.

THE FOUNDING OF THE SCHOOL

Massachusetts has maintained for a considerable period of time two of the most prominent day law schools in America—the Harvard University School of Law and Boston University School of Law. These schools, however, were not, and have not been able to reach a very large group of highly intelligent and ambitious employed men who desire advancement either through preparing for the legal profession or through a law training which might be applicable in their business careers. Prior to 1898 there was a persistent demand for an evening law school which should be thorough in its instruction and conducted in such a manner that its graduates would stand well at the Bar and be recognized as men of professional attainment and ethical standards. In response to this demand Northeastern University School of Law was established in 1898 through the co-operation and under the active guidance of the late Hon. James R. Dunbar, the late Prof. James Barr Ames, Dean of the Harvard University Law School, and Mr. Samuel Bennett, then Dean of the Boston University School of Law.

Divisions of the Northeastern University School of Law have been established as indicated below. The nature and quality of work offered in these divisions is the same as that offered in Boston—the work being under the same supervision and administration as the Boston work.

From the outset the Worcester Division of the Law School admitted women to its classes. Springfield, in 1921, decided to admit women, effective with the entering class of September of that year. In January, 1922, the trustees of Northeastern University, acting upon the recommendations of the corporation of the School of Law, voted to admit women to the school in Boston and in all of the Divisions, subject, so far as the Divisions were concerned, to the approval of the local boards. This step of the trustees was taken after very careful consideration of the points involved, acting upon the advice of leading legal educators, upon the basis of a persistent demand that women be admitted to the School and upon the experience of outstanding law schools in co-education: it being found that,

with the exception of Harvard and Columbia, where women have not been admitted, all of the leading law schools of the country are admitting women, with excellent results, to their classes and in full candidacy for their degrees. In view of the fact that classes in the School are already as large as are desirable, only a limited number of mature women who are especially qualified by experience and training to pursue a law course will be admitted to the School each year.

WORCESTER DIVISION

In April, 1919, the Worcester Division School of Law was officially established and formally announced. Classes did not commence, however, until September of the same year. An Advisory Committee has been of material assistance in guiding the affairs of the School locally and in the selection of the Faculty. The response on the part of the public to the opening of the Worcester Division is best evidenced by the enrolment since its establishment. The entire four-year program is offered. Since the opening of the School in Worcester, women have been admitted as regular students and have made a creditable record in the School.

SPRINGFIELD DIVISION

The Springfield Division of the School of Law, established in May, 1919, was the second division of the School to be formed. The late Chief Justice Marcus P. Knowlton expressed a great interest in the founding of the Springfield Division when the matter was first proposed in 1915, but, with the coming of the war, plans had to be postponed. The Advisory Committee has been of much assistance in the establishing of this Division and in the selection of the Faculty. Springfield and vicinity have given splendid support to this Division as is indicated by the student body. The complete curriculum is being given. Women are admitted as regular students.

PROVIDENCE DIVISION

At a meeting held in Providence early in May, 1920, a group of the leading members of the Rhode Island Bar requested the Directors of the Providence Y.M.C.A., to consider the establishment of a division of Northeastern University School of Law in Providence. This meeting was followed two weeks later by a more representative gathering of the Bar at which the request was repeated. Steps were immediately taken by the Y.M.C.A. to meet this request and in October, 1920, the Providence Division School of Law was opened.

Much very helpful assistance and guidance have been given by the Advisory Committee and a very capable Faculty has been secured. The complete four-year curriculum is offered. Women are not admitted to this Division.

The following resolution was adopted by the Board of Directors of the Providence Chamber of Commerce on May 13, 1920: "Resolved, that the Committee of 100 of The Providence Chamber of Commerce welcomes the establishment of a Branch of Northeastern University in the City of Providence, believing it gives an additional opportunity for the education of employed men."

THE ORGANIZATION OF THE SCHOOL

From the outset the School developed around the following basic principles:

1. A non-proprietary evening law school with high scholastic standards—devoting all of its resources to building up the best type of evening law school.

2. The case method as a basis of instruction: supplemented by lectures and review quizzes.

3. A Faculty made up of men who are graduates of the best law schools, who have achieved success in the legal profession, and each of whom possesses, further, the qualifications of a teacher.

4. A sound course of study.

5. High professional ethics and a preparation for the legal profession, not only in a narrow sense, but in the broader sense of service to mankind.

6. Impartial administration—whereby the rules relating to attendance, grading, examinations and scholarship are impartially enforced.

It is a matter of experience on the part of Northeastern University School of Law that the principles enumerated above can be complied with on the part of evening law schools and must be complied with by this type of school; provided the work of these schools is to have any warrant for continuance. An evening law school, such as Northeastern University, which carefully selects its Faculty and its student body, organizes a sound course of study, and insists upon the highest possible ethical standards, can be of incalculable value to society through the training of men who will become efficient leaders. With the tendency from a republican representative form of government to a democratic form of government, in which the people are directly responsible, it is more than ever imperative that men be trained who are capable of the highest type of efficient leadership. It is to this ideal that evening law schools should consecrate their efforts and it is this ideal to which Northeastern University has consecrated its efforts.

SUCCESSFUL CAREER

The School has proved to be a success. Approximately seven thousand four hundred and sixty students have been enrolled, including business executives, clerks from the offices of leading attorneys; clerks and officers from every court in Boston, state, city, and government officials; teachers and students from other law schools; and a large number of able men engaged in various other lines of activity. About 84 per cent of the 1,042 graduates in Boston have passed the bar examinations in Massachusetts, or in other states, and of the remaining 16 per cent, the larger number are business or professional men who have not intended to enter upon the practice of Law and, for that reason, have not attempted the bar examinations. When these figures are considered in relation to the fact that of 614 men recently examined in Massachusetts only 38 per cent were successful, the success of Northeastern University in preparing for admission to the bar is apparent.

Various reports, alumni letters and other sources of information evidence the fact that those who have completed the required course of study have profited immeasurably by the training which they have received.

INCORPORATION

In January, 1904, a bill was introduced into the Massachusetts Legislature seeking the incorporation of the School, with the power to grant the degree of Bachelor of Laws. The rapid passage of this bill by the legislature, and the cordial recognition and endorsement of the School by the bench, the bar, and the heads of our day law and other professional schools, testify in no uncertain terms to the position the School occupies in the educational activities of the Commonwealth.

THE STUDENT BODY

Four general groups of students are pursuing the prescribed course in the School of Law:

1. Those who are preparing for the legal profession.
2. Those who are studying law as a means of a more efficient

unctioning in business. With the increased complexity of business organization due to large scale marketing, large scale production, and the development of means of communication in the form of railroads, and telephone and telegraph, it is certain that no training can be of greater value to business executives than a training in law.

3. Students who are uncertain as to their life work and are taking the law as a "finding" course. The study of law, because it deals with practically every phase of human relationship, is an excellent means by which a young man can analyze himself and come to a definite decision concerning his life work.

4. A comparatively large number of the students are taking the study of law for informational and cultural purposes.

The student body is drawn mostly from business and professional men, although almost every vocation is represented. For the most part the men are relatively mature—a recent survey showed 20 per cent of the student body to be over 30 years of age and 38 per cent of the student body 26 years or older. The contact with one another of students from various fields of activities and of widely ranging ages is of considerable value as an aid to the development of those personal qualities which tend to make for social efficiency. Over 39 per cent of the students have had at least one year of college work prior to entering the school—the larger number of these college men having received degrees.

It is felt that the admission of women, effective September, 1922, has added a valuable element to the student body and has furnished opportunities for law study to a group of highly efficient women who desire personal advancement and a life of professional service. The success of women students in the leading law schools of the country, with the exception of Harvard and Columbia where they have never been admitted, is such as to leave no room for doubt as to the advisability of admitting them to the study of law. Universal suffrage and the consequent opening up to women of various public offices have made it more than ever desirable that women be permitted to

enter upon the study of law in preparation for more efficient community and political leadership and for active professional practice.

METHOD OF INSTRUCTION

There are three methods of instruction employed by law schools: The lecture method, in which the instructor gives presentation exercise and assigns cases to be read; the case method, in which cases are assigned to be read in advance, and later discussed and commented upon in class; and a combination of these two systems, in which the instructor's lecture or presentation of the essentials is followed by the discussion of cases previously read.

Twenty-six years' experience has led the School of Law to adopt a modification of the third method, namely: Lecture, citation, and discussion, supplemented with written tests and systematic quizzes. The value of this method is clearly demonstrated by the success of the students at the bar examination and later in practice.

THE FACULTY

The success of the Law School can be attributed, in large measure to two factors: First, to impartial administration whereby the rules relating to attendance, grading, examination and scholarship are strictly and impartially enforced; and above all, to the Faculty, which is made up of men, many of whom have graduated from their respective law schools with scholastic honors, and all of whom have been successful in the legal profession. The contact of the students with practicing attorneys of broad experience, liberal training, and high ethical and professional standards has proved of inestimable value; and has resulted in the development of a school which has been to the highest degree successful.

ADMISSION REQUIREMENTS

The following are the admission requirements to the School of Law:

1. The applicant must be at least eighteen years of age.
2. The applicant must be of good moral character.
3. A student entering as a candidate for the LL.B. degree must furnish satisfactory credentials showing that:
 - a. He is a graduate of an approved day high school, or a school of equal grade,
or,
 - b. He is a graduate of an institution of recognized collegiate grade,
or,
 - c. He has completed satisfactorily fifteen units*of secondary school work in an approved day high school or in a school of equal grade,
or,
 - d. He must pass satisfactorily entrance examinations covering fifteen units of secondary school work.
or,
 - e. Men of maturity and business experience, who, while they have had a certain amount of high school work have minor technical deficiencies in previous training, must pass a Thorndike Test of General Intelligence for high school graduates, which is used for admission to colleges and professional schools, with a score indicating the general intelligence expected of high school graduates, and must meet such further requirements as the Committee on Admission may prescribe. Applicants who desire to take the examination must in each case secure permission from the Dean to do so.

*A unit represents a year's study in any subject in an approved day secondary school, constituting approximately a quarter of a full year's work. A four year's day secondary school curriculum is regarded as representing not more than sixteen units of work.

4. A limited number of special students, not candidates for the degree, may be admitted to the School at the discretion of the Committee on Admission and the Dean. Such student must furnish satisfactory evidence of maturity and of ability to pursue a law course. Those admitted as special students can in no way be subsequently re-classified as regular students and receive the LL.B. degree.

The attention of men who, because of previous education cannot enter the Law School as regular students in candidacy for the LL.B. degree is directed to the following rules of the Bar Examiners of Massachusetts:

- a. "All applicants who are graduates of a college, or who have complied with the entrance requirements of a college, or who have fulfilled for two years the requirements of a day or evening high school or a school of equal grade, or who have an education equivalent thereto, shall, so far as their general education is concerned be deemed qualified to be admitted to the Bar and shall be considered eligible to take the regular law examinations."
- b. "The rule of the board as to term of study of the law will be satisfied by.....four years' study in any approved evening law school having a four years course . . ." By this rule an applicant need not be a graduate of an evening law school—four years' study being sufficient to meet the Bar requirements in Massachusetts.

In view of the above rules of the Massachusetts Bar Examiners, men who possess maturity, experience, and general fitness for the legal profession may enter upon the study of law and meet the Bar requirements, even though they do not possess educational qualifications required of students who are candidates for the LL.B. degree. Such special students as are admitted to the School will be furnished certificates of completion showing the courses which they have pursued and the grades which they have attained while members of the School.

5. Women are admitted to the School under the same conditions as men, that is, under the admission requirements as outlined above.

ADVANCED STANDING

Candidates for admission to advanced standing should file their applications and credentials regarding previous study of law with the Dean. After consideration of the standing of the school and the nature and extent of the applicant's attendance and scholarship thereat, the School authorities will apprise the applicant of his status as a student upon entering the Law School.

One or two years' attendance at an accredited three-year day law school may be counted as a part of the required four-year period of school attendance.

APPLICATIONS FOR ADMISSION

Applications for admission to the School should be filed as early as possible in order that the case of each applicant may be thoroughly investigated and his status definitely determined before the opening of School. Furthermore, on account of large enrolments, it has been found necessary to limit the size of the entering class: for this reason, also, it is vital that those who wish to be assured of admission to the School, file their applications well in advance of the opening date.

TUITION AND OTHER FEES

FRESHMAN YEAR

Application fee:

Payable on filing application for admission \$5.00

Tuition fees: At opening of School\$35.00

November 16 35.00

January 15 30.00

Total 100.00

Total.....\$105.00

SOPHOMORE YEAR

Tuition fees: At opening of School\$35.00

November 16 35.00

January 15 30.00

Total \$100.00

JUNIOR YEAR

Tuition fees: At opening of School.....\$35.00

November 16 35.00

January 15 30.00

Total \$100.00

SENIOR YEAR

Tuition fees: At opening of School\$35.00

November 16 35.00

January 15 30.00

Total \$100.00

Graduation fee:

Payable March 2 10.00

Total \$110.00

SPECIAL STUDENTS

a. Taking regular course of study—rates as above.

b. Taking a limited number of courses, not equivalent to a full year's schedule:

Application fee\$ 5.00

Full year's course 35.00

Half year's course 20.00

STUDENTS REVIEWING

Students may be permitted by the Dean to review single courses or a full year's work at one-half of the regular tuition rates. Students who are required to take review work because of failures in previous years are also allowed the privilege of half-rates.

SPECIAL FEES

- a. Condition Examinations.....\$2.00
(see page 25)
- b. Thorndike Test for Admission\$2.00
(for those seeking admission by this method—see page 17)
- c. Graduation Fee\$10.00
(payable by all members of the senior class on or before March 2)

IN GENERAL

All tuition fees include a limited membership in the Y.M.C.A. or Y.W.C.A., or similar organizations in the case of women (not including gymnasium and natatorium privileges).

Men duly enroled in the School are allowed reduced rates in the case of the gymnasium and natatorium.

The application fee is payable only once, on initial entry to the School.

WITHDRAWALS AND REFUNDS

Students who are forced to withdraw from the School are requested to notify the School office in writing to the effect that they are withdrawing, giving their reasons for doing so. These notifications should be given promptly.

As the School assumes the obligation of carrying the student throughout the year when the student registers, and as the University provides the instruction and accommodations on a yearly basis, the Executive Council of the University has ruled as follows:

A. Applications for refunds must be presented within sixty days after withdrawal from the School.

B. Credits and refunds will be granted only as stated below:

1. The unused portion of the tuition paid by the applicant may be placed in suspense and used at some future time to apply upon the tuition of any school in Northeastern University. This is done, provided the reasons set forth in the application meet the approval of the Committee on Refunds, and on the further condition that the credit be used within two years.
2. Cash refunds may be granted only in cases where students are compelled to withdraw on account of personal illness. The application must be accompanied by a satisfactory certificate from the physician.

In the event of withdrawal after initial application for admission has been filed, no refundment is made of the five dollar application fee. If a student is forced to withdraw, because of non-acceptance by the School, he will be refunded one-half of the application fee, or two and one-half dollars.

ENROLMENT

Owing to the delay each year on the part of the students, and the consequent rush on the opening night, those desiring admission are requested to register during the two weeks previous to the opening of the School.

For application blanks for admission to the School, or for further information, address the Dean of the Law School.

It is of the greatest importance that students attend the lectures from the opening night and receive credit therefor. In order to receive attendance credit students must enrol and arrange for the payment of their tuition. After the application blanks have been filed in the office of the Law School, letters have to be written and credentials have to be obtained and acted upon before the students' status can be determined. This necessarily requires considerable time. Manifestly, students should not wait for the status reports but should enrol and commence work at the beginning of the school year.

RULES AND REGULATIONS

ATTENDANCE UPON LECTURES

1. The student must attend at least one-half of the lectures and review quizzes in a course in order to be permitted to take the examination therein. No exception is made to this rule.

2. If the student attends at least three-fourths of the lectures and review quizzes in a course, he is entitled to take the examination therein and will pass if he attains a grade of 60 per cent.

3. If the student attends between one-half and three-fourths of the lectures and review quizzes in a course, he must furnish satisfactory excuse to the Committee on Attendance for the absences under three-fourths in order to be permitted to take the examination therein; and, further, he must attain a grade of 70 in order to pass in such examination.

4. A student must have an aggregate attendance of at least two-thirds of all the lectures and review quizzes scheduled for him in a given year in order to be enrolled the year following as a regular student.

5. A student must have an aggregate attendance of at least two-thirds of all the lectures and review quizzes scheduled for him in his entire curriculum in order to qualify in attendance for his degree. No exception is made to this rule.

6. In order to receive credit for attendance a student must be present in the classroom during the entire period, unless upon satisfactory excuse, his presence for a shorter period is accepted by the Committee on Attendance.

EXAMINATIONS

One final examination is regularly given in each course at the close thereof.

One make-up examination is regularly given each year in each course, those in Senior subjects in the spring and those in Junior, Sophomore, and Freshman subjects in September.

See schedule for September, 1925, on page 2.) Moreover, a student may take as a make-up any mid-year or final examination regularly given in the course in which he is conditioned.

A student who fails in the mid-year or final examination in a given course receives credit for only 60 per cent even if he obtains a higher grade in a make-up examination in that course.

If a student, for good cause, does not take the examination given at the close of a course, he will be permitted to take it any time thereafter when an examination in that subject is regularly scheduled; and, since that will be his first examination herein, he will receive full credit for whatever grade he attains.

The receipt of a passing mark in a course precludes a student from another examination therein.

A fee of *two dollars* is charged for each condition examination taken by a student. This sum must be paid on or before the date of the examination and no man will be admitted to any condition examination until the fee has been paid in full. Students desiring to take condition examinations should report to the School Office to make necessary payments and to receive admission cards to the examinations. This rule does not apply to men taking, as make-up examinations, the regular examinations given at the close of a course.

In order to be permitted to take an examination in a course, the student must qualify in attendance. (See attendance regulations.)

TESTS

A system of tests is maintained whereby two tests are regularly given in each full year course and one test is regularly given in each half-year course. In each of the two tests in a full year course a maximum of five points is obtainable toward the student's final grade or in both tests combined a maximum aggregate of ten points is obtainable toward a student's final grade. In the half-year courses the one test that is given is longer than is the test in a full year course, a maximum of ten points being obtainable in the half-year courses toward a student's final grade in the particular course in which the test is taken. In each instance the remaining ninety points is ob-

tainable by work in the regular examinations given at the conclusion of the courses.

If a student does not take certain of the tests when they are regularly scheduled, he will be permitted to do so at any time thereafter when the test in the subject is given, with the requirement, however, in a full-year course, that a man who has missed the first semester test must take a first semester test as a make-up, and a man who has missed a second semester test must take a second semester test as a make-up. If a make-up test is the first trial which a man has made, he will receive credit for whatever grade he obtains.

The receipt of three points in a test in a full-year course precludes the student from taking a corresponding test in the course. If a student received less than three points in a test in a full-year course, he will be permitted to take the corresponding test in that subject when it is regularly scheduled, but will receive credit for only three points even though he obtains a higher grade.

In the single test in a half-year course a student who has received six points in the test cannot take another test in the subject. A student who receives less than six points in the test given in a half-year subject will be permitted to take the test again when it is regularly scheduled, but will receive credit for only six points even though he obtains a higher grade.

SPECIAL EXAMINATIONS OR TESTS

Under no conditions will special examinations or tests be given in a course. Students desiring to take examinations or tests must either take the regular final examinations or tests or, in case of examinations, the regular make-up examinations in the subjects in which they desire to be re-examined.

MARKS

For relation between attendance and marks, see pages 24 and 25.

With respect to grade, a student is entitled to a degree if he obtains at least 60 per cent in all courses scheduled in the entire

four-year curriculum or if, failing in one Senior subject, he obtains an average of at least 65 per cent in all courses so scheduled; provided always that his attendance is not such as to require 70 per cent as a passing mark.

It will be noted from the foregoing that attendance affects the student in two ways; viz., (1) in qualifying to take examinations in his respective courses, and (2) in qualifying for the degree.

The required period of attendance at the School is four years, except for students entering with advanced standing.

A student qualifies for *cum laude* distinction if he obtains an average of at least 85 per cent in all courses scheduled in the entire four-year curriculum.

Grade reports are mailed to the students from the office of the Dean, or of the divisional director in cases of divisional schools.

LAW CONDITIONS

No student who fails to pass the examinations of his class will be permitted to continue with the class, except by special permission. Any student who during two successive years shall fail to pass a sufficient number of examinations to enable him, in the opinion of the Committee on Administration, to proceed to a higher class may be dropped from the rolls of the school.

No student, who fails on account of law conditions, to receive his degree in due course, will be permitted to remove his conditions and qualify for the LL.B. degree by examination only, later than one year following the graduation of his regular class, or other than by actually taking over and passing examinations in all of the courses in which he has failed. Permission to repeat courses and the conditions under which such work can be taken will be decided upon by the Committee on Administration in each individual case.

REQUIREMENTS FOR THE DEGREE

In order to qualify for the degree of Bachelor of Laws, a student must meet the following requirements:

Be at least twenty-one years of age at time of receiving the degree.

Comply with admission requirements.

Make the required attendance upon lectures.

Obtain the required marks in all courses scheduled for the degree.

Note. Candidates for graduation should file their applications together with their graduation fee in the Law School office not later than March 2nd of the year in which they expect to receive their degree.

OUTLINE OF COURSES*

FIRST YEAR

TORTS

(Thirty-six Weeks)

Definition of tort; theory of liability in tort; distinctions between tort and breach of contract; defences to torts or apparent torts; assignability of right of action in tort; damages; discharge of torts; disability; including responsibility of infants, married women, insane persons, municipal corporations and charities in tort; assault and battery; false imprisonment; trespass to property; slander and libel; slander of title; enticement and seduction; loss of consortium; deceit; infringement of trade-marks; malicious prosecution; negligence.

Ames' and Smith's Cases on Torts.

Wigmore's Cases on Torts.

CONTRACTS

(Thirty-six Weeks)

Offer and acceptance; consideration; performance of, or promise to perform non-contract obligation as consideration; moral obligation as consideration; antecedent act or agreement as consideration; parties to a contract, including aliens, executors and administrators, guardians, infants, insane persons, intoxicated persons and married women; omitting agents, corporations and partners on account of these subjects being given in other courses; contracts under seal, including the form, requisites thereof, delivery and the matter of consideration; rights of beneficiaries under a contract; rights of assignees of a contract; conditional and unconditional contracts; rescission of contracts; damages for breach of contract; illegality; duress; mistake; statute of frauds; quasi-contracts.

Keener's Cases on Contracts, second edition.

*The order of courses, so far as the Divisions are concerned, may be changed from time to time as deemed necessary by the Administration.

CRIMINAL LAW

(Twenty Weeks)

Sources of criminal law; the elements of crime; effect of consent, condonation, negligence of person injured, coercion and necessity; criminal intent; effect of mistake of fact, infancy, insanity, and intoxication; the criminal act; attempts; parties in crimes; assault and battery; mayhem; false imprisonment; abortion; rape; murder and manslaughter; larceny; embezzlement; obtaining property by cheats and false pretenses; receiving stolen property; burglary; arson; forgery; libel; perjury; conspiracy; criminal procedure in Massachusetts.

Mikell's Cases on Criminal Law.

AGENCY

(Sixteen Weeks)

Capacity of the parties to the relation; creation of the relation; authority of an agent; manner of execution of authority; effect of relation as between principal and agent, between agent and third persons, and between principal and third persons; ratification; duration and termination of the relation.

Wambaugh's Cases on Agency.

LEGAL ETHICS

(Six Weeks)

The duty of the lawyer to the courts; the defence or prosecution of those accused of crime; adverse influences and conflicting interests; the duty of the lawyer to his client; negotiations with the opposite party; acquiring interest in litigation; the lawyer's fee; contingent fees; the duty of the lawyer to his fellow lawyers; the duty of the lawyer to the adverse party and witnesses; the conduct of the lawyer in court; advertising; the responsibility of the lawyer for litigation; the duty of the lawyer to society at large.

THE CASE METHOD OF INSTRUCTION

(Ten Weeks)

The case method of law instruction, its origin and a comparison of it with other methods of instruction; the sources of

our law, constitutions, common law and statutes; distinctions between law and equity; divisions of the law, civil, criminal and otherwise; adjective law and substantive law; the common law, its origin and underlying principles; the doctrine of *stare decisis*; the relative value of text-books, case-books, digests and the reports; how to read and abstract a case; differentiation between decision and dicta; imperative and persuasive authorities; outline of forms of action, pleadings and subsequent proceedings in the trial of a case; the commentaries.

“The Study of Cases,” Wambaugh.

“The Sources of the Law,” Gray.

SECOND YEAR

PERSONAL PROPERTY AND SALES

(*Thirty-six Weeks*)

Distinction between real and personal property; rights of action based on possession or on ownership; possessory interests in chattels, including bailments, pledges and liens; acquisition of ownership in chattels, including adverse possession, accession, confusion, judgment and gifts; fixtures and emblements.

Sales and mortgages of personal property; subject matter of sales; when title passes; risk of loss; rights and remedies of seller and buyer in executed, executory and conditional contracts of sale; warranties of title and quality; seller's lien and stoppage *in transitu*, bills of lading and other documents of title; fraud; statute of frauds; factors and recording acts; actions and defenses.

Bigelow's Cases on Personal Property.

Woodward's Cases on Sales.

EQUITY I

(*Thirty-six Weeks*)

History, nature, and limits of the jurisdiction; the jury in equity; the maxims; assignments; equitable rights, including accident and mistake, fraud, notice, estoppel, conversion, adjustment of liabilities; equitable remedies, with particular attention to specific performance and injunctions; reformation and rescission, account, and other pecuniary remedies.

Ames' Cases in Equity. Vols. I and II.

BILLS AND NOTES

(*Twenty-four Weeks*)

The provisions of the General Laws of Massachusetts, Chapter 107—Negotiable Instruments Law (in Massachusetts

only). Formal requisites of negotiable and non-negotiable bills of exchange, checks and notes; obligations and rights of the various parties to such instruments, makers, acceptors, drawers, drawees, payees, indorsers and indorseees; suits upon bills and notes; pleading and defenses, accommodation paper; bankers' and trade acceptances; letters of credit; guaranty and generally of the transfer, negotiation and extinguishment of bills and notes.

Colson's Hufcut on Negotiable Instruments, second edition.

REAL PROPERTY AND ITS TRANSFER *INTER VIVOS*

(*Thirty-six Weeks*)

The feudal system; tenure in land; estates in land, including their creation and methods of conveyance under the feudal system; reversions, remainders and other future estates; joint ownership; disscisin and the remedies therefor; uses and trusts; air; right to lateral support; water; profits; easements; licenses; covenants running with the land; rents; waste; public rights in waters and highways.

Acquisition of real property *inter vivos*. Accretion; adverse possession; prescription; form of conveyances at common law; deeds,—description of property granted, boundaries, estates created, incorporeal hereditaments, covenants for title, estoppel by deed, execution, delivery; dedication; examination of titles.

Bigelow's Cases on Rights in Land.

Warren's Cases on Conveyances.

THIRD YEAR

TRUSTS

(Thirty-two Weeks)

Nature and requisites of a trust; a trust distinguished from a debt; constructive and resulting trusts, charitable trusts, etc.; language necessary to create a trust; consideration; the Statutes of Frauds and Wills; subject matter of a trust; the *cestui que* trust; the trustee; nature of the *cestui que* trust's interest; transfer of trust property, rightful and wrongful; extinguishment of a trust; duties of the trustee.

Scott's Cases on Trusts.

PROPERTY III *(First part)*

(Eighteen Weeks)

Future and conditional interests in property.

Estates on condition, rights of entry for condition broken, license and waiver of breach, possibilities of reverter, reversions, vested and contingent remainders, future uses, executory devises and bequests, failure of executory devises, construction of limitations, cross-limitations, vesting of legacies, gifts on failure of issue, ascertainment of classes, powers, rule against perpetuities, restraints on alienation, illegal and impossible conditions.

Kale's Cases on Future Interests.

PROPERTY III *(Second part)*

(Eighteen Weeks)

Mortgages; Landlord and Tenant; Joint Ownership.
Probate Law and Practice.

Warren's Cases on Conveyances.

WILLS

(Twenty-four Weeks)

Escheat; descent; statutory rules; wills—kinds, alternatives, advantages and scope of; execution; sound mind; fraud and

undue influence; mistake; form; attestation; incorporation by reference; revocation by change in circumstance; by subsequent instrument; by physical act; dependent relative revocation; revival; republication; lapsed, void and adeemed gifts; conflict of laws; construction; probate and administration; jurisdiction; procedure; powers of representative; payment of debts; payments of legacies and distribution; statutory rights and allowances; practice.

Costigan's Cases on Wills.

BUSINESS ASSOCIATIONS

(*Thirty-six Weeks*)

Nature and characteristics of three principal types of business association. *Partnership*: Creation of partnership; rights and duties of partners among themselves; power of partners to bind firm; individual liability of partners; dissolution. *Joint stock association*: How created; how different from a partnership; rights and duties of members among themselves; powers of members and managers to bind association; associate and individual liability; dissolution. *Corporation*: How created; how different from joint stock association; corporate personality; capital stock; rights and duties of members; powers of corporation and its officers; how a corporation acts; corporate and individual liability; dissolution.

Case books to be announced.

FOURTH YEAR

(*Old Curriculum*)

EVIDENCE

(*Thirty-four Weeks*)

Judicial notice; judge and jury, or law and fact; burden of proof presumptions; admissions; confessions; principles of exclusion; relevancy; character evidence; hearsay evidence and exceptions thereto, including declarations as to matters of pedigree, matters of public interest, public records, declarations in regular course of business, account-books, declaration against interest, *res gestae*, dying declarations, declaration made under oath, declarations showing physical or mental conditions; opinion evidence; best evidence; writings as evidence; examination of witnesses.

Wigmore's Cases on Evidence.

Thayer's Cases on Evidence.

PROPERTY III (first part)*

(*Eighteen Weeks*)

Conditional and future interests in property, including reversions and remainders; rules against perpetuities; forfeiture and restraints on alienation.

Kale's Cases on Future Interests.

PROPERTY III (second part)*

(*Eighteen Weeks*)

Mortgages; Landlord and Tenant; Joint Ownership.

Probate Law and Practice.

Warren's Cases on Conveyances.

CONSTITUTIONAL LAW

(*Seventeen Weeks*)

Written and unwritten constitutions; history and sources of written constitutions in the United States, state and national establishing and amending constitutions; distribution of powers between the national and state governments; distribution of

*Property III (first part) and Property III (second part) are treated as entirely separate courses with respect to attendance, examinations, monthly tests, etc.

powers among the three departments; the judicial department; nature of judicial power; jurisdiction of the federal government, criminal and civil; express, implied, resulting and inherent powers; functions of administrative officers; citizenship; civil and political rights; the police power; the right of eminent domain; taxation; impairment of contracts, *ex post facto* and retrospective legislation generally; regulation of commerce.

Hall's Cases on Constitutional Law.

COMMON LAW PLEADING

(*Sixteen Weeks*)

Procedure from the original writ to appeal and review of judgment; how a right may be enforced and a remedy obtained in the courts; venue of actions; forms of actions, local and transitory, real, personal and mixed; original and judicial writs; pleadings, their necessity, uses, forms and rules by which they are governed; the effect of pleadings in conduct and results of the trial; protection of rights of the parties before, during and after trial, and before and after judgment; revision of proceeding, exceptions, appeal and review.

Scott's Cases on Civil Procedure.

Keen's Cases on Common Law Pleading.

MASSACHUSETTS PRACTICE

(*Sixteen Weeks*)

Courts in Massachusetts and jurisdiction of each; venue of actions, local and transitory; writs, including service of same; arrest on mesne process and on execution; attachment of mesne process and by trustee process; what property is exempt; entry of actions; appearances, nonsuit and default; pleadings, including declaration, answers, demurrers, etc.; set-off, recoupment and cross actions; tender; offer of judgment; interrogatories; depositions; masters and auditors; trial; exceptions; motions for new trial; motion to vacate judgment; writs of review, error and *audita querela*; appeals; execution;

replevin; summary process to recover land; writ of entry; mechanics' lien; extraordinary writs; Statute of Limitations; equity pleading and practice; probate practice; marriage and divorce.

SECTION WORK—QUIZZES

In addition to the formal lectures the students meet regularly throughout the year for a systematic review of the material covered by the regular lectures. In Boston the Freshmen meet twice each week for half-hour quizzes. In Boston and in the Divisions at least six hours is devoted to intensive review work during the latter part of each course. These reviews are additional to the regular lectures. The quizzes are conducted by experienced instructors.

MOOT COURT

In connection with the course on Practice, a Moot Court is carried on. Actions are instituted in this court and carried through all the intermediate stages of final judgment in accordance with the practice prevailing in the State court. Students are designated to act in the capacity of clerks, attorneys, parties and of others who regularly make up the personnel of the usual court organization.

Instruction of a practical nature is thus given to the students in matters pertaining to practice. They are shown what steps have to be taken preliminary to the trial and how to take them; they have the intricate procedure of the trial visualized for them; and they are made to carry out in detail all measures which need to be taken supplementary to the trial in order to realize the benefits of a successful issue or to safeguard the rights of clients in case of an adverse decision.

In a word, the purpose of the Moot Court is to give the students actual experience in using in a practical way the knowledge of the law which they get in the other courses of the curriculum.

SPECIAL LECTURES

Special lectures are offered from time to time on subjects not included in the regular program of instruction. These lectures

are open to members of the Law School without additional expense.

BAR EXAMINATION REVIEW

(Twenty-four Sessions)

Ample provision is made for reviewing the work of each year in the regular School schedules; and, at the close of the full course—just previous to the bar examination—the whole field of the law is covered by a systematic review of great value to the students. Mr. Asa S. Allen, Associate Dean of the Law School, is most effective in this review work in Boston, and his classes are attended, not only by Northeastern students, but by graduates of the other New England Law Schools.

In order to make the work of the Law School as valuable as possible, an arrangement has been made whereby each regular member of the Senior Class in Boston may attend this review course without additional expense.

This opportunity for free instruction will be available to students but once, and then only upon the presentation of a card of admission signed by the Dean. Graduates of other law schools who desire to take this review course will arrange personally with Mr. Allen.

Adequate bar reviews are conducted in each Division of the School by competent instructors.

GENERAL INFORMATION

HISTORICAL SKETCH

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896, that the actual foundations for the University were laid. The larger number of courses offered required a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering was opened in 1909 and given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, and Bachelor of Chemical Engineering. The School of Business Administration was opened in September, 1922, and has the right to grant the degree of Bachelor of Business Administration. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, the Automotive School, and the Vocational Institute are conducted under the administration of the University. Divisions of the University offering evening instruction have been established at Worcester, Springfield, New Haven, and Providence.

BOOKS

Case-books are required in the courses. These books may be purchased by the student in many cases from the University book store, in other cases directly from the publishers at their Boston offices. If convenient, the books of the Law Library

may be used in the building. It is advantageous for a student to own the books, however, in order that he may better employ his hours at home.

Notes, note-books and general supplies may be obtained at the book store at reasonable rates.

LAW LIBRARIES

Boston

The Law Library, located in the Y. M. C. A. Building at Boston, is large, well-equipped and comfortably furnished. In it may be found case-and text-books on all of the subjects taught in the School, as well as on related subjects, the National Reporter System, the State Reports of Massachusetts and New York, the English Reports, United States Supreme Court Reports, Corpus Juris Cyc, encyclopedias of law, etc. Additions of standard law books of value to the students in their law studies are being made regularly to the Library. A library is so essential to the success of a law school that a great deal of attention to it is necessary in order to insure that it is well-equipped and efficiently administered. For this reason the Northeastern University officials are particularly alert to meet the needs of the situation and to progressively build up an excellent and thoroughly practical Law School Library which may serve as a working laboratory for the students.

The library is open daily from 9.00 a.m. to 10.00 p.m.

Worcester

The Worcester Division has made a good start toward building up an excellent Law Library. A special library room has been provided. New books are being added each year so that the students may have the best material at their disposal. A full set of Massachusetts Reports, Acts and Resolves, Digests, Case-Books, Text-Books and other valuable material is available.

Springfield

Springfield is fortunate in having access to the splendidly equipped law library of the Hampden County Court House. It has, however, for the immediate convenience of its students a library of several hundred volumes within its own building. Full sets of Massachusetts Reports, Acts and Resolves, Digests, Corpus Juris and Cyclopedia of Law and Procedure, and Case-Books are available. Other valuable material is also on its shelves through gift or loan of Faculty and friends. This includes material not only on American law but many sets of old English Reports.

Providence

A small but well selected Law Library is available for all Providence students. New volumes are being added regularly. A full set of the Rhode Island Reports, Standard Case-books, Statute Books and other valuable reference material has been placed in a specially fitted room to which students have easy access during the day or evening.

By special arrangement the Supreme Court Law Library is open at least one evening each week for the use of students.

BUILDINGS

The School of Law is housed in the Y. M. C. A. Buildings in Boston, Worcester, Springfield, and Providence. Each of these buildings is of modern construction and offers excellent and varied facilities for the use of the students.

CLASSROOMS

Adequate, well-lighted, heated and ventilated classrooms are provided.

DORMITORIES

In each Y. M. C. A. Building are dormitory facilities whereby students may secure comfortable, and well furnished rooms at a minimum price. There is a congenial atmosphere of fellowship and of social life in the dormitories, and opportunities are available for forming the best type of friendships.

PHYSICAL CULTURE

Each building has unexcelled facilities in the nature of gymnasiums, swimming pools, and bowling alleys. Opportunities are provided for practically every physical activity. School of Law men are urged to avail themselves of the opportunities for physical training. It is especially necessary that men who are employed during the day and studying in the evening take some kind of adequate exercise in order that they may do the most effective school work.

REDUCED GYMNASIUM RATES TO STUDENTS

In order to insure the use of the gymnasium and to bring it within the means of all students, reduced rates are granted to students.

OTHER RECREATIVE OPPORTUNITIES

Other recreative opportunities of a widely varied nature are offered in the form of billiard rooms, libraries, game rooms, and other facilities. In fact the Y. M. C. A.'s in which the School of Law is located are equipped for almost every type of clean, virile, and wholesome activity.

SOCIAL LIFE OF THE SCHOOL

The constant association with other men of outstanding ability from nearly every type of human activity is of incalculable value to the student of law. In addition to the usual classroom contacts men are also brought into contact with one another through special lectures, class dinners, and other school functions which are highly profitable and pleasurable.

THE Y. M. C. A.

Northeastern University is conducted by the Young Men's Christian Association and, though non-sectarian, is thoroughly Christian in character. Students are encouraged to participate in the activities of the Association, so far as is consistent with their own particular religious beliefs. However, a student

should not hesitate about entering the School because of religious faith, no attempt being made to influence one to participate in activities which are contrary to the tenets of his particular religion.

RELIGIOUS ACTIVITIES

Students are cordially welcomed and urged to participate in all the activities of the Y. M. C. A.—it is hoped that they will feel free to do so to the largest extent possible. In connection with the various departments of each Association, an ample social and religious program is provided, so that all men should be able to find that type of activity in which they are most interested. Full information may be received on inquiry.

NORTHEASTERN UNIVERSITY CLUB

The Northeastern University Club was organized in the spring of 1921 with graduates of the Schools of Law, Commerce and Finance, and Engineering as charter members.

The purpose of the Club is to promote social activities among the alumni of Northeastern University; to perpetuate the Northeastern spirit in the business life of the community; to give to their Alma Mater the benefit of the experience of the alumni in the School and of their experience in business and professional activities since their graduation.

Any man of good character, twenty-one years of age or over, who is a graduate of any of the Schools of Northeastern University granting a degree or who has attended such schools for a period of two full years is eligible for membership.

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Joseph Krichmar	George Millen
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Edward D. Larkin	Morris S. Miller
Victor A. Larrson	Robert Mittel
Edward F. Lawler	Paul A. Mogan
John D. Lawler	John J. Moran
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Joseph F. Leary	William F. Morrissey
Louis Leeder	Alan R. Morse
Alan A. Lees	Gardner S. Morse
Phillip Lemelman	Louis Y. Muchnick
Russell W. Letterrey	Edward T. Mulkern
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 Francis R. Murphy
 John H. Murphy
 Timothy C. Murphy
 James F. Murray
 Olive S. Newbegin
 Louis Neyman
 George Nicholson, Jr.
 Lawrence J. Nolan
 Timothy F. O'Brien
 Daniel P. O'Connell
 Daniel J. O'Connor
 Edward J. O'Connor
 John A. O'Donnell
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 Timothy J. O'Leary
 Hyman E. Orenberg
 Israel R. Ostrofsky
 Leonard Otis
 Toivo A. Partan
 Elmer F. Perkins
 Louis Perlmutter
 Harry Perlstein
 Joseph L. Pierce
 Jacob Plotkin
 Robert J. Plunkett
 Aaron Pofcher
 Hyman A. Polansky
 Morris E. Povich
 John T. Powell
 William E. Preble
 Pauline A. Prendergast
 Jacob Prenovitz
 Samuel Prince
 Elmer E. Proctor
 Simon Queen
 William V. Raleigh
 Helmer M. Raphael
 Michael J. Redington
 William G. Regan
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 John J. Reid, Jr.
 Leo Resnick
 Florence Rice
 James F. Riley
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 Ethel O. Rome
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 Dorothea B. Rosenberg
 Sydney Rosenthal
 Allan S. Ross

Lena A. Ross
 George B. Rossman
 Jacob Rothner
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 Leon Rubin
 Myer C. Rubin
 Benjamin W. Rudd
 Edmond W. Ryan
 John A. Ryan
 Phillips C. Salman
 Arthur G. Sampson
 Earl M. Sampson
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 Philip B. Sawyer
 Samuel M. Sax
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 Morris M. Schaffer
 Abraham Schneider
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 Martin R. Schofield
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 Milton J. Segal
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 William Shand
 Jennie R. Shankman
 John E. Shannon
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 Morris Shimlovich
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Barney Victorovitz	Samuel Zimmon

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Ensang W. Cheng	George W. Macwha
Louis J. Fish	Louis A. Maxson
Romeo R. Gallerani	Walter J. McCorkle
John W. Gorman	Mary C. Moloney
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Ralph B. Heavens	George Saievetz
Harold G. Hood	Harold R. Savage
Philip F. Hooper	Charles B. Waddell, Jr.
William J. Kirby	J. Harvey White

STATISTICAL SUMMARY

Class of 1925	120
Class of 1926	187
Class of 1927	280
Class of 1928	432
Irregular Students	20
Total	1,039

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NORTHEASTERN UNIVERSITY

*School of
Commerce and Finance
Evening Sessions*

1925-1926



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316 HUNTINGTON AVENUE • BOSTON, MASSACHUSETTS

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Statement Involving New Standards of the School of Commerce and Finance for the B. C. S. Degree

Northeastern University through its Evening School of Commerce and Finance is desirous of rendering the largest and most effective service to its student body, to the community at large, and to the business interests of New England.

In order to render this service the University has considered for some time wherein the school might increase its educational offerings through enriching its curriculum and its instruction. After a very careful comparative study of the School of Commerce and Finance with other leading business schools of collegiate grade, the Board of Governors of the University has adopted the following standards for the future operating basis of the school:

First—Effective with the entering class of September 1926, the hour requirements for the B. C. S. degree will be sixty semester hours of classroom instruction plus twenty-four semester hours of satisfactory business experience, thus adding one full year to the requirements for the degree.

Second—Effective with the entering class of September 1927, the hour requirements for the B. C. S. degree will be seventy-two semester hours of actual classroom instruction plus twenty-four semester hours of satisfactory business experience. This increase in hours means that it will take six years instead of four, as at present, for the average student to complete the requirements for the degree. The program of a student will consequently be very much enriched.

Third—Concurrent with the increased offerings a new curriculum is to become effective in September 1926. This curriculum is being made a matter of exhaustive study through a scientific approach which will insure the maximum co-ordination between the academic work of the school and actual business. Several groups of prominent business men are rendering marked assistance in the study now being made. Students who are not candidates for the B. C. S. degree but who desire shorter courses will find that their needs are met in the new curriculum, logical stopping points of completed work being available; those who complete a systematic two year course of study will be awarded a Certificate of Proficiency; those completing a four year systematic course of study will be granted a Diploma; those who complete the full requirements for the degree will be awarded the B. C. S. degree. Further than this there will be ample opportunity for those who desire single courses in specialized fields.

As a result of these new requirements the school will be in a position to offer a greatly enriched program and to render a more effective and permanent service through a broader as well as a more highly specialized training for business.

NORTHEASTERN UNIVERSITY

SCHOOL OF
COMMERCE AND FINANCE

EVENING SESSIONS



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CALENDAR, 1925-26

1925	September 8	Registration Commences
	September 8-12	Examinations for Entrance, for Removal of Conditions, and for Advanced Standing
	September 14-18	Senior and Junior Class Sessions Begin
	September 21-26	Freshman and Sophomore Class Sessions Begin.
	September 21	First payment of Tuition due
	October 12	Columbus Day (Classes omitted)
	November 1	Last day for filing application for M.C.S. Degree and the subject and outline of Thesis
	November 16	Second payment of Tuition due
	November 26	Thanksgiving Day (Classes omitted)
	December 19	
	to	
1926	January 2	Christmas Recess
	(Both dates inclusive)	
	January 18	
	to	
	February 1	Mid-year Registration Period
	January 18-30	Mid-year Examination Period
	January 25-29	Senior and Junior Second Semester Class Sessions Begin
	February 1-5	Freshman and Sophomore Second Semester Class Sessions Begin
	February 1	Third payment of Tuition due
	February 22	Last day for filing application for B.C.S. Degree
	March 1	Washington's Birthday (Classes omitted)
	March 15	Payment of Graduation Fee
	April 19	Fourth payment of Tuition due
	May 17-29	Patriot's Day (Classes omitted in Massachusetts)
	June 6	Final Examination Period
	June 9	Baccalaureate Services at Providence, Springfield and New Haven
	June 10	Commencement Exercises at Providence and Springfield
	June 13	Commencement Exercises at New Haven
	June 15	Baccalaureate Services at Boston and Worcester
	June 21	Commencement Exercises at Worcester
		Commencement Exercises at Boston

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Saturdays, 8.45 a.m.-1 p.m.
July 1-August 15
Daily (except Saturdays and Sundays), 9 a.m.-4 p.m.
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THE SCHOOL OF COMMERCE AND FINANCE

EDUCATION FOR BUSINESS

The industrial stage of economic evolution which had its beginning in the latter part of the 18th century thru discoveries which led to the development of power and machine industry is characterized by the following significant changes in the economic organization of society:

- a. Large scale production, marketing and distribution.
- b. The corporation as the most effective business unit.
- c. The extensive development of the credit basis of exchange, only 4% of the business of the world being now transacted thru a cash medium, thus necessitating the rise and growth of complicated banking and credit institutions.
- d. The development of extensive means of communication such as: the telephone, the telegraph, railroads and steamship lines.
- e. The break-down of the apprenticeship system and the decrease in trade heredity.
- f. The specialization of industry, the technical subdivisions of labor and the growing complexity in the mechanical processes coupled with a marked concentration and integration of industry.
- g. A marked growth in the complexity of commercial organization and in problems effecting large scale marketing and distribution.
- h. The narrowing margin of profits which makes necessary an increasing elimination of inefficiencies and waste in business and industry.

These significant changes have led to an increase in the demands which society makes upon educational institutions. For illustration, a recent statement of the National Industrial Conference Board in session in New York City declares that with all that the existing training agencies can do, there will be a dearth of 200,000 trained executives in business and industry in the United States alone by 1930. Trade and commercial schools have sprung up, and more recently, and in increasing numbers, colleges and universities have established schools of commerce and business ad-

ministration and of engineering for the purpose of meeting the need for trained men in commerce and in industry.

At first these schools of business offered only isolated, unrelated courses, which were not developed into systematic and well-coordinated curriculums, except in accounting, where a well-established body of principles was developed early into the science of accounting leading to the recognition of the field as a distinct profession. Recently, however, attention has been directed to other phases of business with the result that the underlying principles of business have been discovered thru a study of basic problems; and business in its broadest aspects has been evolved into a distinct science and a profession.

Until recently young men and women desiring to enter business started in a minor clerical position and worked up thru the several departments of an organization until they had thoroly mastered the details of some one job in which they might best function. Today, however, the process of trial and error has become extremely difficult and impractical, if not impossible, because of the magnitude of business enterprises. One who is to acquire that knowledge of business which will enable him to make the best use of his abilities and advance most rapidly, must supplement business experience by a thoro and systematic study of business which will give:

- a. A command over the basic principles underlying business as a science.
- b. The development of definite marketable skills thru training in the application of these principles to typical business problems and situations.
- c. The development of a habit of thinking which assures clear analysis and sound judgment in meeting business problems.

A study of the causes of business failures reveals the values of trained leadership and makes evident the need of a thoro understanding of the basic principles underlying business management. The chart on page 11 compiled by Bradstreet's is the result of a study of the causes of the 19,159 failures in the United States in 1923.

In the light of these facts it is imperative that the business man, irrespective of his official capacity in an organization, should have a thoro understanding of fundamental principles and their application to business conditions. Proper training in the principles and practices of business procedure will eliminate a large percentage of business failures.

This training can best be acquired by those who are employed during the day, in evening schools of commerce and business administration under trained instructors who are also experienced business men. Such a training will insure, on the part of capable students, the broad business point of view and that knowledge of sound business principles and methods which will lead to positions of responsibility and to opportunities for increased service.

CHART I

WHY BUSINESS FAILS IN THE UNITED STATES

Failures	Number	Liabilities
A. Due to Faults of those Failing		
1. Lack of Capital	34.2	31.8
2. Incompetence (irrespective of other causes)	33.7	20.0
3. Inexperience (without other incompetence)	4.7	2.7
4. Fraudulent Disposition of Property	4.2	5.9
5. Extravagance	1.3	1.5
6. Unwise Credits	1.2	3.6
7. Neglect of Business (due to doubtful habits)	1.2	.5
8. Speculation (outside regular business)	.3	2.1
Totals	80.8	68.1
B. Not Due to Faults of those Failing		
1. Specific conditions (disasters, war, etc.)	16.3	26.6
2. Failures of Others	1.5	4.6
3. Competition	1.4	.7
Totals	19.2	31.9

HISTORY OF THE SCHOOL

Northeastern University was among the first institutions in the country to recognize and meet the demand for education for business as outlined above. The School of Commerce and Finance was established in March, 1907, and was incorporated with the power to grant the B.C.S. and M.C.S. degrees in 1911. With the active co-operation and support of leading educators and business men, among whom was Edwin Gay, then Dean of the Harvard Graduate School of Business Administration, the curriculums and programs of study were carefully planned with a view of providing the most effective and feasible training in business for employed men. From the beginning the School was successful and soon established an enviable reputation for thoro work in all depart-

ments and has steadily maintained a position of progressive leadership in the field of education for business.

Since the establishment of the School a large number of regular students have been enrolled, of whom 719 have received the B.C.S. degree and 15 the M.C.S. degree. A distinctive service also has been rendered to those who have been enrolled in the special courses and who have not been candidates for a degree.

For several years the School has laid especial emphasis upon the curriculum in Professional Accounting. At present 101 C.P.A. certificates are held by graduates of the School.

More recently, the School officials, appreciative of the fact that business was rapidly becoming a profession, have extended the scope of activities of the School of Commerce and Finance to include a basic training and specialization in the various fields of business management and marketing — aiming to furnish, on the one hand a thoro training in the fundamentals, and, on the other hand, specialized training in the particular field of the student's interests and abilities. The success of the business management and marketing curriculums, as well as the continued outstanding success of the accounting curriculum, has been such as to justify the extension of the work of the School to include these larger fields.

DIVISIONS

Divisions of the University are located in the Young Men's Christian Associations at Worcester, Springfield, Providence, New Haven and Bridgeport. In each of these Divisions the School of Commerce and Finance is conducted and a complete program leading to the B.C.S. degree is offered, altho owing to the diversified needs of the different cities, not all the courses or curriculums given in Boston are conducted in the Divisions. The standards of work, the admission requirements, and the regulations in the Divisions are identical with those required in Boston — the work being under the same supervision and administration as that in Boston. The Faculty for each Division is selected with care, approved and supervised by the administrative authorities of the School and the University. The content of the courses are alike in practically all cases, except where there may be sufficient reason for deviating from the approved course; such deviations, however, being approved only after a careful consideration of the elements involved.

Students completing the required courses in the Divisions are granted the B.C.S. degree upon graduation.

Students who find it necessary to transfer from one Division to another, or from Boston to a Division, or vice versa, may do so with credit for work already completed. Those contemplating such transfers should notify their local School office before making the transfer.

THE STANDARDS OF THE SCHOOL

The School of Commerce and Finance is an evening school of recognized standing and is operated in accordance with the following standards:

- a. A carefully co-ordinated and well-developed program which gives the student a basic understanding of sound business policies and principles from which he develops a definite marketable skill in business practice.
- b. The development of opportunities of training in specialized fields which will meet the needs of men interested in such fields. The School is more interested in providing a thoro training in fundamental principles in these fields than in furnishing a detailed technique most of which can best be secured thru daily contacts and experience in a business position.
- c. The combination of business experience and organized business knowledge, so that the student develops the abilities of applying business principles as taught in the classroom to the daily occupation in which he is employed.
- d. The selection of the most competent and experienced faculty. Only those men who are qualified by experience to give advice and guidance in their respective fields, and who know how to impart effectively in the classroom business principles and their application, are employed.
- e. The development of an appreciation of the value of ethical and moral standards and practices in business.
- f. A non-proprietary evening collegiate school of business with high scholastic standards devoting all its resources to the training of mature men of worthy character and ambition for positions of aggressive leadership in business.

METHOD OF INSTRUCTION

The instruction of the School is based upon the presentation and discussion of business problems from which general principles are deduced. These principles as deduced are tested and applied in turn by the student in his solutions of problems assigned for home work, in written reports, and in daily experiences and contacts in business. In so far as possible the problems are drawn from actual business conditions and are so arranged that the student may have the opportunity to study the conditions creating the problem and to formulate a solution.

Frequent short tests are required. These tests are given with the purpose of aiding the student in the analysis of a problem under pressure and the crystallization of his thinking upon specific fundamental principles that have been deduced from problem assignments.

To a certain extent, depending upon the course and the time available, written reports and analyses are required of all students pursuing courses that are adaptable to such a method. These reports often require special study and investigation of a business problem where facts and data are gathered, the conditions analyzed and a presentation made of the findings with conclusions and recommendations.

The best available text books are used in all courses where books are needed. Materials have been especially prepared to meet the needs of specialized fields.

THE FACULTY

The Faculty of the School of Commerce and Finance is made up primarily of business and professional men who have had excellent training and a wide experience in the subjects which they teach. Many of these men are devoting much time to a scientific study of business and have been selected for the Faculty because of their positions of leadership in their particular field of specialization. The ability to impart knowledge and experience to the student in a scholarly manner and at the same time so that the student grasps the content and principles involved, and the interest and sympathy with the students who are devoting their evenings to serious educational purposes are prerequisites of all instructors in the School. The contact of the student with business men of

such broad experience, liberal training, and high moral and professional standards has proved of great value; and has been one of the chief factors to which the success and development of the School may be attributed.

THE STUDENT BODY

The student body is drawn largely from business and commercial organizations, altho almost every occupation is represented. The wide association of a student with men and women from the many different fields of business and industrial activity which may be found represented in the School is a valuable aid in the training for a business career.

The following chart shows the representative occupational groupings now in the School.







CHART II
OCCUPATIONS OF STUDENT BODY, 1923-24

Occupations	Per cent
Clerks	34.0
Miscellaneous	11.0
Bookkeepers	10.7
Accountants	9.3
Executives	9.3
Salesmen	9.2
Factory workers	5.0
Proprietors	2.6
Secretaries	2.5
Educators	2.0
Buyers	1.2
Cashiers	1.1
Bank workers	.8
Professional	.5
Government workers	.5
Treasurers	.3

Students entering the school are relatively mature and come with a distinct purpose in view. The seriousness with which the students pursue their courses, their maturity, and their experience and close association with business, make it possible to accomplish more and better work in the classroom.

Chart III shows the age classification of the students.

CHART III
AGES OF STUDENT BODY, 1923-24

Ages		Per cent
20 and under		23.0
over 20 and under 25		32.0
25 and under 30		27.0
30 and under 35		11.1
35 and under 40		4.4
40 and over		2.5

The above chart shows that 6.9% of the student body are over 35 years of age, that 18% are over 30 years, that 45% are over 25 years, and that only 23% are 20 years and under.

Those who enter the School in general, do so for one of the following reasons:

1. To prepare for advancement.
2. To secure a broader and better preparation for the responsibilities of their present work.
3. To secure a thoro and scientific University training in business
4. To become acquainted with the best and most modern methods of conducting a business enterprise.
5. To enable them to handle their own personal affairs in a more business-like manner.
6. To discover their own abilities and come to a decision as to their life work.

THE ALUMNI

Since 1914, when the first class was graduated, there have been 719 graduates upon whom the B.C.S. degrees and 15 upon whom the M.C.S. degrees have been conferred. Certified Public Accountant's Certificates to the number of 101 are held by graduates of the School.

A study just completed of the alumni body reveals the positions held upon entering the School and the positions now held.

CHART IV

COMPARISON OF PRESENT POSITIONS OF ALUMNI WITH THOSE HELD UPON ENTERING THE SCHOOL

Upon entering		Present positions
12.0%		Accountants 30.1%
9.6		Executives 22.3
36.1		Clerks 9.7
1.9		Proprietors 9.0
16.8		Bookkeepers 6.6
1.4		Treasurers 4.7
2.8		Salesmen 4.7
2.8		Educators 3.9
.9		Gov't workers 2.3
4.8		Secretaries 1.9
3.8		Miscellaneous 1.6
1.9		Cashiers 1.2
.9		Bank workers .8
4.3		Factory workers .8
0.0		Buyers .4
100.0%		100.0%

Financial returns as a result of the training received in the School of Commerce and Finance are most clearly shown in Chart V.

CHART V

COMPARATIVE CHART SHOWING THE INCOME OF THE ALUMNI UPON ENTERING THE SCHOOL AND THE PRESENT REPORTED INCOME

Upon entering		Present incomes
25.0%		Under \$1,000 0.0%
33.0		1,000 to 1,499 9.2
22.5		1,500 to 1,999 19.5
11.4		2,000 to 2,499 13.7
3.5		2,500 to 2,999 12.7
2.4		3,000 to 3,499 12.7
1.1		3,500 to 3,999 6.8
1.1		4,000 to 5,999 8.1
0.0		6,000 to 7,999 11.5
0.0		8,000 to 9,999 3.5
0.0		10,000 and up 2.3
100.0%	Total	100.0%

The average increase of income from the time of entering the School until the present is 127.3%. The lowest increased income shows a raise of $3\frac{1}{2}\%$ while the most notable increase represents a gain of 823%. Only three cases of decreased income are reported, one representing $33\frac{1}{3}\%$, one 25.7% and another 8%, two cases being changes of employment from a mechanical to a clerical occupation.

The lowest reported annual income upon entering the school was \$260, and the largest \$4,000. The lowest reported present annual income is \$1,000, and the largest \$12,000.

Some of the specific values derived from the training received in the School are referred to by the alumni as follows:

1. The ability to effectively plan and control functions in a business enterprise.
2. An increased confidence in handling complex business problems.
3. A definite marketable skill with larger financial returns.
4. A greater sense of security, a surer basis of continued success, and a keener appreciation of the moral and social obligations to society.
5. A greater appreciation of the finer and better values of life, an enriched friendship, and a new vision of one's life work.

ADMISSION REQUIREMENTS

1. *Admission Classification of Students*

All students in the school are classified as follows:

- a. A Regular Student is one who has fully met the admission requirements and is a candidate for the degree.
- b. A Conditioned Student is one who at the time of entrance to the school has deficiencies in his previous school work but is admitted conditionally as a candidate for the B. C. S. degree.
- c. An Unclassified Student is one who is taking single courses or groups of single courses in the school and who at the time of entrance signifies that he is not seeking admission as a candidate for the B. C. S. degree.

2. *Admission of Students*

- a. An applicant may be admitted as a *regular student* if he meets one of the following requirements:
 1. Graduation from an approved day high school or school of equal grade.
 2. Completion of 15 units* of work in an approved high school or school of equal grade.
 3. Men over 21 years of age with satisfactory business experience who have certain deficiencies in previous school work, may take, subject to the approval of the Dean or Director, a Thorndike Test of General Intelligence for High School Graduates and qualify for admission by passing the test with a score indicating the general intelligence expected of high school graduates. If deficiencies in educational background are apparent additional examinations or educational requirements may be prescribed as deemed necessary by the Committee on Admission.
- b. An applicant may be admitted as a *conditioned student* under the following rules:
 1. Applicants 18 to 21 years of age may be admitted to the school provided they have 13 units* of approved high school work and may be reclassified as Regular Students upon the removal of 2 units condition. Such students will be permitted to

pursue courses not exceeding four semester hours in any one year. Credit for the degree cannot be given for courses pursued prior to reclassification.

2. Applicants over 21 years of age who cannot satisfy the requirements for admission as Regular Students may be admitted as Conditioned Students. Such students may be reclassified as Regular Students upon having fully met the requirements for admission of Regular Students.
3. Conditioned Students are not eligible for reclassification by the Thorndike Test method.
4. Courses taken in the school may be applied toward removal of entrance conditions upon the basis of one unit* for each two semester hours of work.
5. Conditioned Students must remove all admission conditions and reclassify as Regular Students before entering upon their senior year.
6. A student cannot offer the same course both as credit for admission and for the degree.

c. An applicant may be admitted as an *unclassified student* and reclassify under the following conditions:

1. Subject to the approval of the Dean, an Unclassified Student may be reclassified at any time if at the time of entrance to the school he was eligible for admission as a Regular or Conditioned Student.
2. Upon reclassification a student may receive credit for work already completed in the school. The same course cannot be offered both as credit for admission and for the degree.

*A unit represents a year's study in any subject in an approved day secondary school, constituting approximately a quarter of a full year's work. A four year's day secondary school curriculum is regarded as representing not more than sixteen units of work.

ADMISSION OF WOMEN

Women are admitted to the School under the same conditions as men, that is, under the above admission requirements.

ADVANCED STANDING

1. *By Transfer of Credit*

Credit for advanced standing in the School may be given for work completed in other approved colleges and universities if

such work is similar in content and character to corresponding courses in the School of Commerce and Finance, but under no conditions will more than thirty-six semester hours of transfer credit be allowed toward the Bachelor's degree. Irrespective of the amount of credit earned in other institutions, students must complete at least one year's work (twelve semester hours) in the School before receiving the degree. Candidates for advanced standing must file certificates upon which transfer credit may be based with their application for admission. A copy of a marked catalog of the institution from which transfer is sought should accompany the transcript of record showing those courses for which credit is desired.

For the Master's degree not more than four semester hours credit by transfer will be accepted. Work offered for such credit must meet the approval of the Committee on Admission.

2. *By Examination*

Applicants who are seeking admission to the School and who desire to secure Advanced Standing Credit toward the degree must meet the following conditions:

- a. A written application for examination, on proper forms secured from the School office, must be presented to the Dean. In arriving at its decision, the Committee will take into account previous training, business experience, and other factors showing the applicant's preparation and ability in the subject or subjects in which Advanced Standing Credit is sought.
- b. A grade of 75 per cent must be obtained in the examination in order to secure credit for a subject.
- c. Not more than twelve semester hours of Advanced Standing Credit toward the degree will be allowed by means of examination.
- d. The same subject cannot be offered both for admission credit and as a basis for an advanced standing examination.

Advanced Standing in certain cases may be secured by examination so as to complete a four-year curriculum in three years. Applicants who have had satisfactory training or experience in bookkeeping, or accounting, are frequently able to secure advanced standing credit in Accounting 1-2 and in some cases Accounting

3-4, and by taking examinations in other required subjects or by taking added subjects each year can meet all requirements for the degree in three years.

REGISTRATION

Students are urged to register early in the season and avoid the rush and delay that comes during the opening week. The School can give each individual better service in completing registration if this is attended to before the opening week. Students should file their application for admission without delay so that their status may be determined as early as possible. Transcripts showing previous education must be secured by the School office and the application must be acted upon by the Committee on Admission before a student's status can be determined. This naturally requires considerable time. All students who have applied for admission and have not been notified as to their status before School begins should report for class work upon the opening week of School unless notified to the contrary.

Each student entering the School for the first time should follow this procedure in completing registration:

1. File the application for admission accompanied by the five dollar (\$5.00) application fee, either in person or by mail, on the blank provided by the School office.
2. Report to the School office in person on or before the opening of School to fill out such additional enrollment forms as are required. At this time the student should arrange his program of work and as far as possible adjust all matters regarding his status.

LATE REGISTRATION

Students should avoid late registration. It is fundamental that they be present at the first class sessions if they are to be most successful in their studies for the year. Those who find it necessary to register late may be permitted to enter the School provided they have not lost so much work as to render it impossible for them to proceed with the courses.

TUITION AND OTHER FEES

Application Fee

Payable but once and only upon initial application for admission to the University and irrespective of the number of subjects pursued. \$5.00

Tuition (per semester)

Each 2 semester hour course.	16.00
Each 4 semester hour course.	32.00
Payable for first semester one-half upon September 22 and balance November 17.	
Payable for second semester one-half upon February 2 and balance March 16.	

This means that the tuition cost of a normal schedule of three evenings a week thruout the year will be \$96 per year. This also applies to the four-year curriculums.

All tuition fees include a limited membership in the Y.M.C.A., or Y.W.C.A., or similar organizations in the case of women (not including gymnasium and natatorium privileges).

Students who desire to review or are required to repeat courses because of failure are allowed one-half of the regular tuition rates.

Incidental Fee

Payable by all students with first payment of tuition. Covers cost of all mimeographed problems and note materials used in the class except such materials as are used in lieu of regular textbook.

Each 2 semester hour course. . . . .	.50
Each 4 semester hour course.	1.00

Examinations

- | | |
|--|------|
| a. Intelligence test for admission — payable at time of taking examination by those seeking admission in this manner. (See page 19, Section 1c.) | 2.00 |
| b. For condition examinations | 2.00 |
| c. For advanced standing examination | 2.00 |

Graduation

A graduation fee is required of all members of the Senior class who have filed applications for the degree. Payable on or before March 1 \$10.00

Certificate

Certificate of Proficiency — when desired 5.00

WITHDRAWALS AND REFUNDS

Students who are forced to withdraw from the School are requested to notify the School office in writing to the effect that they are withdrawing and to give their reasons for doing so. This notification should be given promptly.

As the School assumes the obligation of carrying the student thruout the year when the student registers, and as the University provides the instruction and accommodations on a yearly basis, the Executive Council of the University has ruled as follows:

A. Applications for refunds must be presented within sixty days after withdrawal from the School.

B. Credits and refunds will be granted only as stated below:

1. Cash refunds may be granted in cases where students are compelled to withdraw on account of personal illness. The application must be accompanied by a satisfactory certificate from a physician.
2. In case a student is regularly employed during the day and is sent out of the city permanently by his employer or compelled to change his working hours so as to prevent his continuance in the School, a refund may be granted, provided the application is accompanied by a satisfactory statement from the firm.
3. Tuition not refunded or used may be applied upon subsequent courses pursued in the School, providing such courses are taken within two years from the date of withdrawal of the student.

C. The application fee is not refundable, except in case a student is forced to withdraw because of non-acceptance by the School, in which case one-half of the fee or \$2.50 will be refunded.

REQUIREMENTS FOR DEGREES

A. Candidates for the *Bachelor of Commercial Science* degree must satisfy the following requirements:

1. Make formal application for graduation in the year in which they plan to receive the degree, at such time and upon such forms as may be required by the School office.
2. Must have met the admission requirements and have been admitted to the School as a regular student in candidacy for the degree.
3. Must have secured a minimum credit of seventy-two semester hours. (A semester hour is the unit of credit which indicates satisfactory completion of one sixty minute period of classroom work or its equivalent per week for one semester of seventeen weeks. A course which meets 120 minutes per week thruout one semester receives a credit value of two semester hours.)
 - a. At least forty-eight semester hours credit either thru advanced standing or thru satisfactory completion of courses in the School.
 - b. Not more than twenty-four semester hours credit for successful business experience. This credit is given on the basis of not more than eight semester hours per year. The interpretation of what comprises successful business experience is left to the discretion of the Dean, who will take into consideration the nature of the experience and the responsibility attendant thereto. Where the experience is of such a nature as to warrant giving either partial or no credit, the student may be required to take additional courses to complete the required number of seventy-two semester hours or the degree may be withheld until the student secures the necessary business experience. In allowing credit for business experience frank recognition is made of the general business training which the student is acquiring in his daily occupation. The daily vocation becomes the laboratory in which the principles taught in the classroom are applied.

B. Candidates for the *Master of Commercial Science* degree who hold a Bachelor of Commercial Science or an equivalent degree in business must meet the following requirements:

1. Make formal application for the degree not later than November 1 of the year in which they enter upon graduate study.
2. Must complete two years of resident study embodying a minimum credit of twenty-four semester hours, of which four semester hours credit is allowed for the thesis. Not more than four semester hours credit will be accepted by transfer of credit from recognized collegiate Schools of Business.
3. All work presented for credit toward the Master's degree must be of a grade of C (75%) or better.
4. Presentation of a thesis on an approved subject in the specialized field of study. The subject and outline of the thesis must be submitted to the proper committee thru the Dean not later than November 1 of the school year in which the candidate expects to take his degree. The thesis must give evidence of original study and research and must be completed and filed on or before May 15 preceding Commencement with the Board of Examiners appointed by the Dean. Two bound typewritten or printed copies of the thesis must be presented in prescribed form for the School and the Library.
5. Pass an oral examination given by a Board of Examiners appointed by the Faculty. Such an examination may be based upon the specialized field of research and study followed in the presentation of the thesis, and upon the relationship of that specialized field to business in general.

C. Candidates for the Master of Commercial Science degree who hold the A.B., S.B., Ph.B., LL.B. or other recognized degrees, not in the field of business, must meet the following requirements in addition to Nos. 1, 3, 4 and 5 under B above:

1. Complete courses in the School totaling forty-eight semester hours credit, of which the thesis counts four hours credit. Advanced standing credit by transfer will be considered in subjects taken for the Bachelor's degree if such subjects are equivalent to those offered in this School.

THE CERTIFICATE OF PROFICIENCY

A candidate for the *Certificate of Proficiency* must meet the following requirements:

1. Must have met the same admission requirements as students who are admitted to the School as candidates for the B.C.S. degree.
2. Must have secured a minimum credit of thirty-six semester hours in one of the prescribed two-year curriculums, as follows:
 - a. At least twenty-four semester hours credit thru satisfactory completion of courses as required.
 - b. Not more than twelve semester hours credit for successful business experience. (See 3b, page 25.)

GRADUATION WITH HONORS

Honors are based upon the excellence of the work performed by students in the School. Two honorary distinctions are conferred upon properly qualified students upon graduation:

- a. High honors to those who complete all term work and examinations thruout their course with at least 90% of A's and no marks below B.
- b. Honors to those who complete all term work and examinations thruout their course with at least 50% of A's and of the balance 75% of B's.

These honors are subject to further conditions as follows:

1. The work must be completed in four academic years.
2. Courses credited by advanced standing whether by transfer or by examination will be eliminated in determining honors.

REGISTRATION OF CERTIFIED PUBLIC ACCOUNTANTS

In practically all states provision is made in the statutes for the registration of Certified Public Accountants. Examinations are held either under the supervision of the American Institute of Accountants or of the State.

In Massachusetts under the provisions of the general laws the following rules should be observed by applicants for the examination:

1. All applications must be filed with the Board of Registration, Room 145-A, State House, Boston, at least two weeks prior to the date upon which an examination is to be given.
2. To be registered as a Certified Public Accountant the applicant must have a general education equivalent to a four-year course in a high school of recognized standing, must have had not less than two years of practical experience either in public practice on his own account or as assistant to a practicing public accountant and shall pass an examination in the following subjects:

ACCOUNTING THEORY AND PRACTICE
AUDITING
COMMERCIAL LAW

If an applicant fails to pass the examination either in Auditing or Commercial Law he shall be required to take a subsequent examination only in the subject in which he failed.

3. Applicants who are members of the Massachusetts Bar shall not be required to take the examination in Commercial Law.
4. A fee of \$25 must accompany the application. The fee for re-examination in case of failure is \$10.

Students living in Rhode Island and Connecticut desiring to take examinations in those states should apply to the proper authorities having in charge registration and the examinations.

ORGANIZATION OF CURRICULUMS

PRINCIPLES AND PURPOSES

The curriculums of the School have been planned with a twofold purpose: First, to give an organized scientific knowledge of the basic principles and conditions underlying business; and second, to give classroom instruction so intensely practical and workable that the student gains an intimate knowledge of the everyday task at which he is now engaged or will be engaged in order that he may acquire that technical knowledge and training which combined with the scientific knowledge of the basic principles will be conducive to successful accomplishment in actual business.

In each of the four-year curriculums of Business Management, Marketing, and Professional Accounting, the first year is constant thruout and has been so designed as to give a basic introduction to the fundamental principles underlying all business activity. The mastery of these principles is so important that all students are required to pursue the first and second-year courses as listed.

In addition to the four-year curriculums leading to the degree, one and two-year curriculums affording specialization are offered in Boston and in some of the Divisions.

While students are admitted to single courses and while special curriculums will be laid out to meet the needs of individual students, nevertheless each student is advised to undertake one of the organized curriculums outlined below which have been co-ordinated and balanced so as to give the most effective business training. Before entering the School and during the course of his work in the School it is desired that each student confer with the Dean or other School officials with respect to his program, his vocational problems, and his progress both in School and in his daily employment.

The Divisions are not offering all the curriculums which are given in Boston. The needs are different in the different cities and it has been found inadvisable to attempt to offer the same number of curriculums in all cases. The required courses in such curriculums as are offered in the Divisions are the same as those in Boston, the electives varying to some degree.

BUSINESS MANAGEMENT

(Formerly Business Administration Curriculum)

The Committee on Waste in Industry appointed by Herbert Hoover, President of the Federated American Engineering Societies, points out that 50% of the responsibility for the waste in industry can be placed at the door of management and less than 25% at the door of labor. While similar studies of such an intensive and extensive nature have not been made in the fields of finance, distribution, accounting, and transportation, it is to be very much doubted whether any of these fields have reached even the degree of efficiency in management found in industry. A recent study made by the Society for Electrical Development shows that 47 men were employed in distribution as contrasted with 19 in production.

In view of the above facts the necessity for trained executive leadership and managerial ability in business is apparent and needs no argument.

The purpose of this Management Curriculum is to develop the capacity of the student to perform the functions of business management, namely, Planning, Organizing, Deputizing, and Supervising. "Management," as this curriculum defines it, "is the art and science of co-ordinating men, money, material and equipment so that a high degree of beneficial results will accrue to society."

This training is designated for those who hold or wish to occupy positions as sales managers, office managers, management engineers, general managers, superintendents, and other departmental and junior executive positions. This curriculum develops those abilities and gives a knowledge of those principles that are peculiar to management and will be exceedingly valuable to that individual who has already acquired or is acquiring skill in his occupation but who desires an additional background for the study of Management as related to his occupation.

BUSINESS MANAGEMENT CURRICULUM

FIRST YEAR

FIRST SEMESTER	Ev'gs per week	H'rs per week	SECOND SEMESTER	Ev'gs per week	H'rs per week
Elements of Accounting	1	2	Elements of Accounting	1	2
Business Administration	1	2	Business Administration	1	2
Business English	1	2	Law of Contracts and Agency . .	1	2

SECOND YEAR

Managerial Accounting	1	2	Managerial Accounting	1	2
Marketing Problems	1	2	Marketing Problems	1	2
Law of Business Associations . .	1	2	Sales and Commercial Papers . .	1	2

THIRD YEAR

Business Management Prob- lems	1	2	Business Management Prob- lems	1	2
Money and Banking	1	2	Business Finance	1	2
(Elect 2 hours)			Personnel Management	1	2

FOURTH YEAR

Business Statistics	1	2	Business Statistics	1	2
Industrial Management	1	2	Business Reports	1	2
(Elect 2 hours)			(Elect 2 hours)		

ELECTIVES

Credits and Collections	1	2	Credits and Collections (cont.)	1	2
Life Insurance	2	4	Life Insurance (repeated) . .	2	4
Advertising Principles	1	2	Sales and Advertising Cam- paigns	1	2
Salesmanship	1	2	Retail Store Management (cont.)	1	2
Retail Store Management . . .	1	2	Law of Bankruptcy, Surety- ship and Property	1	2
Income Tax Procedure	1	2			
Investment Analysis	1	2			

PROFESSIONAL ACCOUNTING

The professional dignity surrounding the work of the public accountant and the reward of satisfaction that accrues from rendering a distinctive professional service to society are compensations not measured in financial returns. The junior accountant just entering the profession will do well if he receives \$100 to \$150 a month. Even this basis of compensation assumes specialized training. In time, when he receives his C.P.A. certificate, his income should be from \$3000 to \$5000 per year with the possibility of even higher financial rewards as he becomes more experienced and mature.

In many respects the future in private accounting is more attractive than is public practice. Large, as well as smaller, concerns are constantly searching for trained leadership for positions of controller, treasurer, or chief accountant. Men are wanted for these positions who are willing to assume at the beginning less attractive and responsible positions but who will thru the demonstrations of their abilities in and knowledge of organized business forge ahead to the larger responsibilities.

Technical training in accounting is only one of the necessary requirements for professional and financial success in the profession. It is most essential that a thoro knowledge of accounting be combined with an intelligent working knowledge of the fundamental principles of business organization and management. The student of accounting must be trained in business law, business organization and management, economics and finance, all of which are used constantly and directly in the practice of accounting. Maximum success as an accountant or an executive cannot be realized without a thoro understanding of the fundamental problems and principles of business embodied in statistics, finance, business law, industrial management, marketing, and English.

This Accounting Curriculum has been carefully designed in accordance with the above ideals, and with a view of preparing men for the accounting profession, and the C.P.A. certificate.

PROFESSIONAL ACCOUNTING CURRICULUM

FIRST YEAR

FIRST SEMESTER	Ev'gs per week	H'rs per week	SECOND SEMESTER	Ev'gs per week	H'rs per week
Elements of Accounting....	1	2	Elements of Accounting....	1	2
Business Administration...	1	2	Business Administration...	1	2
Business English.....	1	2	Law of Contracts and Agency	1	2

SECOND YEAR

Advanced Accounting.....	1	2	Advanced Accounting.....	1	2
Money and Banking.....	1	2	Business Finance.....	1	2
Law of Business Associations	1	2	Sales and Commercial Papers	1	2

THIRD YEAR

Junior Accounting Problems	1	2	Junior Accounting Problems	1	2
Specialized Accounting.....	1	2	Law of Bankruptcy, Surety-		
Industrial Management....	1	2	ship and Property.....	1	2
			Business Reports.....	1	2

FOURTH YEAR

Cost Accounting.....	1	2	Cost Accounting.....	1	2
Auditing.....	1	2	Auditing.....	1	2
Income Tax Procedure.....	1	2	C.P.A. Problems.....	1	2

MARKETING AND DISTRIBUTION

The Joint Commission of Agricultural Inquiry of the Sixty-seventh Congress in its Report on Marketing and Distribution says, "The Commission is convinced that the problem of distribution is one of the most important economic problems before the American people and that only thru its solution can there be an equitable adjustment among agriculture, industry, transportation, labor, finance and commerce. The solution of the problem of distribution must be secured thru a betterment of methods and the elimination of wastes and uneconomic practices. A better system of distribution can only be hoped for thru a more intelligent study of methods, facilities and purposes."

A recent study made by Swift & Company based on the necessities of life, produced by forty factories and sold by large and small dealers, gives the following interesting figures of the distribution of the consumer's dollar:

Manufacturing cost	37c.
Manufacturer's selling expense	12c.
Manufacturer's profit	4c.
Wholesaler's expense	10c.
Wholesaler's profit	3c.
Retailer's expense	28c.
Retailer's profit	6c.

Summarizing the above shows that 13% goes to profits, 50% for marketing expense and 37% into raw materials and manufacturing cost.

It is quite evident from the above data that the problem is one needing the most thoro attention, thot and study, not from the viewpoint of production but from that of distribution and marketing.

This curriculum is designed to give the student that necessary background of the economics, the policies, management and methods of distribution in order that he may be able to take a larger part in the leadership that will be expected of our business men within the next decade in solving this important economic national problem.

MARKETING CURRICULUM

FIRST YEAR

FIRST SEMESTER	Ev'gs per week	H'rs per week	SECOND SEMESTER	Ev'gs per week	H'rs per week
Elements of Accounting . . .	1	2	Elements of Accounting . . .	1	2
Business Administration . . .	1	2	Business Administration . . .	1	2
Business English	1	2	Law of Contracts and Agency	1	2

SECOND YEAR

Managerial Accounting . . .	1	2	Managerial Accounting . . .	1	2
Marketing Problems	1	2	Marketing Problems	1	2
Law of Business Associations	1	2	Sales and Commercial Papers	1	2

THIRD YEAR

Retail Store Management . .	1	2	Retail Store Management . .	1	2
Salesmanship	1	2	Personnel Management . . .	1	2
Money and Banking	1	2	Business Finance	1	2

FOURTH YEAR

Business Statistics	1	2	Business Statistics	1	2
Advertising Principles	1	2	Sales and Advertising Cam-		
Industrial Management . . .	1	2	paigns	1	2
			Business Reports	1	2

SPECIALIZED TWO-YEAR CURRICULUMS

Many students feel that they cannot spend the time required to complete a four-year curriculum, but desire an intensive training of a specialized nature. To meet the needs of such students, special two-year curriculums have been prepared offering opportunity for such specialization. Credit toward the related four-year curriculum is allowed if the student should later decide that the degree is desirable.

Upon the completion of twenty-four semester hours of class work and twelve semester hours of satisfactory business experience in any one of the following curriculums, the student will be granted the Certificate of Proficiency in the chosen field of specialization.

C.P.A. PREPARATION

For those who have preliminary preparation in accounting and are now engaged as junior accountants and who desire to make special preparation for the C.P.A. examination, this course is suggested. Only those who have had sufficient previous training and experience will be admitted to this curriculum.

1924-25

FIRST SEMESTER

Junior Accounting Problems
Specialized Accounting
Law of Business Associations

SECOND SEMESTER

Junior Accounting Problems
Business Reports
Law of Contracts and Agency
Sales and Commercial Papers

1925-26

Cost Accounting
Auditing
Income Tax Procedure

Cost Accounting
Auditing
C.P.A. Problems
Law of Property, Bankruptcy and
Suretyship

CREDITS AND COLLECTIONS

Northeastern University in co-operation with the National Institute of Credit offers courses of instruction required by the National Institute for its certificates. A student completing the courses prescribed for the Junior and Senior certificates of the National Institute is entitled to a certificate from the Institute and at the

same time will receive credit in the University toward the degree.

The Junior certificate is awarded to students who have completed the following 20 semester hours of work:

Credits and Collections	4 hours
Economics	4 hours
Business English	4 hours
Accounting	4 hours
Law of Contracts, or Corporation Finance and Investment Credit	4 hours
Total	20 hours

The Senior certificate is awarded to students who have completed the work prescribed for the Junior certificate and 20 additional semester hours making a total of 40 semester hours. Students interested in securing either certificate should consult the Dean.

The following two-year curriculum is suggested for those desiring to work toward either certificate:

1924-25

FIRST SEMESTER

Business Administration (Economics)
Credits and Collections
Money and Banking

SECOND SEMESTER

Business Administration (Economics)
Credits and Collections
Business Finance

1925-26

Business English
Elements of Accounting
Law of Contracts

Business Reports
Elements of Accounting
Sales and Commercial Papers

SALESMANSHIP AND ADVERTISING

The man who engages in the distribution of commodities of any nature needs a thoro knowledge of advertising and selling as a basis of "business building." "Business building" includes every kind of effort that gains and retains trade whether it be printed salesmanship, such as advertising in newspapers or magazines, and the use of booklets, catalogs, or letters; sales effort behind the counter or on the road; the direction of goods thru markets and trade channels; credits and collections; or the handling of and managing of others who function in the distributive processes.

The following courses are suggested for such a program. The student may take all or any part of this program as desired:

1924-25	
FIRST SEMESTER	SECOND SEMESTER
Marketing Problems	Marketing Problems
Advertising Principles	Sales and Advertising Campaigns
Business English	Business Reports
1925-26	
Managerial Accounting	Managerial Accounting
Retail Store Management	Retail Store Management
Salesmanship	Sales and Commercial Papers

FINANCE

In our present complex economic organization finance is a factor of supreme importance. The policies and decisions made by the financial interests have a vital bearing upon the development and management of business enterprises in general.

The financial field is attractive from many viewpoints and specialists in this field are increasingly in demand. Those wishing to prepare for this phase of business activity may do so thru the following two-year specialized curriculum. The courses have been chosen because of their close co-ordination and direct relationship with financial operations in business enterprises.

1924-25	
FIRST SEMESTER	SECOND SEMESTER
Elements of Accounting	Elements of Accounting
Business Statistics	Business Statistics
Money and Banking	Business Finance
1925-26	
Managerial Accounting	Managerial Accounting
Investment Analysis	Sales and Commercial Papers
Credits and Collections	Credits and Collections

RETAIL STORE MANAGEMENT

The business achievements of the retail merchant, whether of the large or the small store, are to be wholly measured in these days of competition in accordance with his ability to rise to his opportunities.

The public wants service and is willing to pay for the right kind of service. It wants convenience and ease in shopping. Individual tastes and styles must be satisfied. The local merchant must realize that he is an integral part of the community, and has the first call upon his neighbors provided his business is conducted upon a sound business and service basis.

This curriculum aims to get at the fundamental problems of the retail merchant, to help the student arrive at satisfactory solutions of his difficulties and to assist him in developing more effective business methods.

1924-25

FIRST SEMESTER

Business Administration
Business Statistics
Advertising Principles

SECOND SEMESTER

Business Administration
Business Statistics
Sales and Advertising Campaigns

1925-26

Marketing Problems
Retail Store Management
Salesmanship

Marketing Problems
Retail Store Management
Personnel Management

SPECIALIZED ONE-YEAR CURRICULUMS

The curriculums below are suggested for those who desire to devote only one year to a systematic specialized study of a limited field of business. Students who have completed one of these curriculums may transfer to a four-year curriculum and upon meeting the necessary requirements later receive the degree.

INDUSTRIAL MANAGEMENT

This course is suggested for those who desire a comprehensive but brief study of the problems arising in the management of an industrial enterprise.

1924-25

FIRST SEMESTER

Industrial Management
Business Statistics
Managerial Accounting

SECOND SEMESTER

Business Reports
Business Statistics
Managerial Accounting

LIFE INSURANCE

After much consultation with the leading Life Insurance Underwriters of the United States and Canada, this course was designed for the purpose of giving a specialized training in the Life Insurance profession. The course has been approved by the National Association of Life Underwriters, the Canadian Life Underwriters and the Boston Life Underwriters. Dr. John A. Stevenson, formerly Director of the School of Life Insurance in the Carnegie Institute of Technology at Pittsburgh and now Vice-President of the Equitable Life Assurance Society, and Griffin M. Lovelace, Director of Life Insurance Courses in New York University, two of the recognized educational leaders in Life Insurance instruction, have directed the formation of this course and have prepared the text and problem materials.

In each class session actual problems are presented and analyzed. The students are required to work out solutions to these problems.

One, two or three evenings a week for either one or two semesters may be taken as desired. The courses other than Life Insurance listed below are suggested because of their close relationship to In-

insurance and should be pursued if possible. (Ask for special folder on this course.)

FIRST SEMESTER	Ev'gs per week	H'rs per week	SECOND SEMESTER	Ev'gs per week	H'rs per week
Life Insurance.....	2	4	Sales and Advertising Cam-		
Salesmanship.....	1	2	paings.....	1	2
			Business Finance.....	1	2

SINGLE COURSES

Any one of the following courses may be taken singly by those who have had the necessary preliminary training to satisfactorily pursue the course they may select. In some cases it may be necessary for the student to have taken some other course prior to the one selected in order that the elementary principles of the subject may be understood before pursuing the more advanced course.

The following courses are suggested:

Advertising Principles	Law of Contracts
Business Administration	Law of Business Associations
Business English	Law of Bankruptcy, Suretyship and
Business Finance	Property
Business Management Problems	Life Insurance
Business Reports	Managerial Accounting
Business Statistics	Marketing
C.P.A. Quiz	Money and Banking
Credits and Collections	Personnel Management
Elements of Accounting	Retail Store Management
Income Tax Procedure	Salesmanship
Industrial Management	Sales and Advertising Campaigns
Investment Analysis	Sales and Commercial Papers

C.P.A. QUIZ

For those desiring preparation and review for the C.P.A. examination a C.P.A. Quiz and Review class is organized early in September and continues until about November 1. Results of this review have been most gratifying to those who have taken the C.P.A. examination. The class meets two evenings each week and Saturday afternoons. The tuition fee is \$40 payable upon enrollment. Those registering in the University for the first time must pay in addition the \$5 application fee.

OUTLINE OF COURSES

The letters and numerals following each course title indicate the classification and number of that course. The following key is used:

A Accounting	B Business Management	E English
Ec Economics	F Finance	
L Law	M Marketing	

All full-year courses are numbered with a double consecutive number and all semester courses with a single number. The Administration reserves the liberty of changing the order of courses within the curriculum or of omitting or substituting courses in Boston or in the Divisions without previous notice. Not all courses are given each year, the School reserving the right to alternate such courses as the Administration may deem necessary. Students should consult the local schedule of classes for information as to courses given during the present year.

The School reserves the right to withdraw in any year any elective or special course for which less than twenty enrollments have been received. Students so affected by such withdrawals will be permitted to choose some other course, or in case of special students, a full refund of all tuition and other fees will be made.

ACCOUNTING (A)

The fundamental purpose of the following courses is to present Accounting so as to meet the needs of those who aspire to the profession of accounting, or of those who must use accounting as a tool of administration and management. The instruction is planned with the view of giving the student a thoro working knowledge and technical skill of accounting principles, methods and systems and of developing the ability to scientifically analyze and solve business problems.

Courses 1 and 2 are required of all students pursuing a regular curriculum. Courses 3b and 4b are required of all students pursuing the Marketing and Management curriculums. All other courses are required of those majoring in Accounting.

Elements of Accounting A 1-2

Two hours each week thruout the year. Credit, 4 semester hours.

This course, the introduction to the study of Accounting, is presented in a manner that thoroly acquaints the student with

the purpose of accounting. He is asked to study the balance sheet and the statement of profit and loss before attempting to make a complete record of accounts. Accounting, as usually taught in its elementary stages, calls for a large amount of detail journalizing, posting, etc., which when once mastered soon becomes monotonous and uninteresting. The more modern method used in this course follows the plan of acquainting the student with the importance of the statement and the balance sheet as reflecting the conditions of a business.

The contents of this course is as follows: scope of accounting; importance and purpose of accounting; financial statements; simple forms of balance sheet and profit and loss statement; theory of accounts; principles of debit and credit; business papers; books of original entry; general journal; cash receipts journal; cash payments journal; sales journal, purchase journal and simple column work without controlling accounts; posting and trial balance; preparation of advanced form of statements; closing books; adjustment entries; mixed accounts; depreciation; accruals; deferred items; simple reserve accounts; capital vs. expense charges; advanced columnar records with controlling accounts; partnership accounting with set and consignments.

Advanced Accounting A 3-4

Two hours each week thruout the year. Credit, 4 semester hours.

This course is a continuation of Accounting A 1-2. Problems illustrating the principles and practices of accounting are assigned for home work, and supplementary reading on the theory of accounts is required each week. The following subjects are considered:

The corporation; voucher systems and factory costs; the balance sheet and principles of valuation; aspects and causes of depreciation; methods of calculating and accounting for depreciation; cash, mercantile credits and merchandise inventory; temporary investments, accrued and deferred items; permanent investments; wasting and intangible assets; current, contingent and fixed liabilities; capital stock and profits; surplus and reserves; dividends; sinking funds; profit and loss summary; liquidation of a corporation; combinations and consolidations; domestic branch houses; foreign branch houses; suspense accounts and fire losses; business statistics; private books; building expenses and income; consolidated balance sheet; accounts and reports of receivers and

trustees; condensed balance sheet and income statement; surplus statement and adjusting and closing journal entries; mergers, fire losses and preferred stock; insurance policies and reorganization of corporation; branch houses; consolidations and mergers; statement of affairs and deficiency accounts; realization and liquidation account.

Managerial Accounting A 3b-4b

Two hours each week thruout the year. Credit, 4 semester hours.

This course is designed primarily for those who expect to engage in administrative and managerial capacities, and is required of all students pursuing the Business Management and Marketing curriculums and is elective for students pursuing the Accounting curriculum. In the administrative activities of business it is desirable to have a classification of policies and procedure and the fixing of responsibility for the performance of each class of activity. This course is given with the view of showing the relation of standards and records to the general problem of management and administration.

The following is the course content: Relation of standards and records to business management; characteristic features of standards and records; organization for controllership, for accounting, statistical, and budgetary control, and for office management; administrative reports; standard forms for balance sheet and statement of income and expense; analysis and interpretation of financial statements; standards and records for sales operation and control; purchase control and operation; records for traffic control and operations; controlling production operations, cost finding, materials, labor and manufacturing expense; personnel control and standards and records; plant and equipment control; standards and records for controlling branch house operation; accounting for investments; control of liabilities; classification, allocation and control of expense disbursements; financial and credit control; budget summaries; partnership and corporation records and accounts; profits control and distribution.

Specialized Accounting A-5

Two hours each week during one semester. Credit, 2 semester hours.

This course shows the application of accounting systems to accounting problems in various types of business. Numerous problems of the following representative types of business are

assigned to the student to be prepared and handed in. Hotels and restaurants; municipal accounting; commission merchants; department stores; cotton mills; refineries; flour mills; cement mills; commercial banks and trust companies; brokerage; building and loan associations; fire and life insurance companies; land development companies; lumber manufacturing concerns; coal mines; oil producing companies.

Local conditions and interests of the class may necessitate the substitution of other typical business enterprises in place of some of the above concerns. Important features relating to each type of business are presented in connection with that business. For example, under hotels and restaurants the various plans of organization, special cash systems and accounting for all rooms are subdivisions of the subject to be considered. Under municipal accounting, nature of public corporations and their organization; municipal finance; classification of accounts; budget accounts and accounting records and forms are given consideration.

Junior Accounting Problems A 7-8

Two hours each week thruout the year. Credit, 4 semester hours.

This course is intended for those who are preparing for the work of the junior accountant and the C.P.A. examination and is required of all students in the Accounting curriculum. Throughout the course the selection of problems from representative types of business is made. The student's solutions are graded and returned so that he may benefit from the careful review by the instructor. Considerable time is given to open discussion of the problems.

The more advanced phases of accounting are taken up in this course, such as individual proprietorship; partnership; division of profits; admission of new partner; dissolution and liquidation of partnership; organization of corporations; capital stock; corporation bonds; surplus, dividends and reserves; corporation statements; manufacturing statements; dissolution and reorganization of corporations; agency and branch accounting; foreign branch accounting; consolidated balance sheets; profit and loss statements; statements of resources and their application; statement of affairs and deficiency accounts; realization and liquidation accounts; profit and loss adjustments as between years; property accounts and depreciation adjustments; inventories and adjustments; insurance and loss adjustments; mathematical and actuarial problems; fiduciary accounting; club and institutional accounting.

Cost Accounting A 9-10

Two hours each week thruout the year. Credit, 4 semester hours.

The object of this course is to acquaint the student with the principles and practices of Cost Accounting as related to industrial enterprises. The one principle aim which is kept in the foreground is that of showing the close relation between Accounting and Management. The course endeavors to outline and present in logical and systematic order the essential steps in cost procedure for industrial enterprises of whatever nature and character. The following is an outline of the course.

The philosophy of costs; analysis of conditions, including a survey of production methods and physical plant; elements of cost; organization line of authority; production departments; non-producing department costs; labor costs; pay roll analysis and distribution; methods of wage payment; purchasing department; materials costs; stores; depreciation; analysis of overhead factors; direct and indirect overhead; control accounts; work in process; production reports; power costs; maintenance costs; deferred and accrued items; standard units of measurement; administrative and selling costs; classification of cost accounts; property records; use of graphs in presenting cost data; relation of interest and cost figures; the use of mechanical equipment in cost work; cost statements.

In connection with the above, numerous problems are assigned to the student for home work. These problems being based on the case method require the practical application of theories outlined in the lectures and textbooks.

Auditing A 11-12

Two hours each week thruout the year. Credit, 4 semester hours.

The course deals with auditing problems as applied to mercantile and manufacturing enterprises. It is a combination of lectures, quizzes, and problem work, the problems being based upon C.P.A. questions.

Balance sheet audits; complete audits; continuous audits; special examinations; the audit of balance sheet accounts; the audit of expense accounts; analysis of accounts; the mechanical work of auditing; special types of business including mercantile, manufacturing, insurance, financial institutions, clubs, insurance companies, etc.; the preparation of audit programs and audit reports.

Income Taxes A-13

Two hours each week during one semester. Credit, 2 semester hours.

A problem course in federal and state taxation embracing the practical application of the 1921 and 1924 Revenue Acts. A series of problems covering the preparation of returns for both the state and federal taxes as affecting corporations, partnerships, public service utilities, and individuals are required to be worked out by the student. Attention to claims, credit, and abatements is given. Particular emphasis will be laid upon regulations now in force.

C.P.A. Problems A-14

Two hours each week during one semester. Credit, 2 semester hours.

This course is a continuation of the Junior Accounting Problem course (A 7-8) and involves more advanced problems embodying many of the subjects considered in Course A 7-8. Several of the most difficult problems of recent C.P.A. examinations are assigned for home work and class discussion. These problems thru their complexity and diversity of subject matter serve as a thoro and final review of the whole field of accounting.

In addition to such major subjects as consolidated balance sheets and statements, liquidation accounts, dissolution and reorganization, statements of affairs, this course gives attention to professional ethics and practices, management of accounting offices, and the relationship of the accountant to other professions.

C.P.A. Quiz A-15

Six hours each week for eight weeks. Credit toward Master's degree only, 2 semester hours.

Beginning early in September, this Quiz is conducted for those desiring to specifically review for the C.P.A. examination in November. The Quiz is open to all who have had sufficient training and experience to benefit thereby.

Ten hours of class work are devoted to a review of Business Law. The remaining time is devoted to accounting and auditing. Typical C.P.A. problems are assigned for home work and class discussion. As a part of the instruction in law, accounting and auditing, the class is required to sit for examination under as nearly similar conditions as the regular C.P.A. examinations. The papers are carefully graded and returned to the student. In the limited time allotted, the class is required to work under pressure in order that the review may be comprehensive and thoro. The success of

candidates in recent C.P.A. examinations is evidence of the thoroughness and value of the Quiz as a basic preparation for the examinations.

BUSINESS MANAGEMENT (B)

The principles of organization and management of business enterprises remain practically constant in all types of business. With the complexity and the rapidly changing conditions of modern business, the functions of administration and management must be clearly defined and maximum economies effected. Thru the problem approach, these courses aim to train the student to supplant guess work and trial and error processes with organized and scientific knowledge and management abilities.

Business Administration B 1-2

Two hours each week thruout the year. Credit, 4 semester hours.

This course is designed as an introductory survey of the whole field of Business Management and Administration. In this study the student becomes acquainted with the outstanding features of the work of the executive and the relationships of the various functions operating within the business unit. The student is first introduced to the underlying economic principles of business management and administration. Later, he studies those factors which the business manager must control and how this control is to be accomplished.

In addition to the initial brief presentation of concrete economic principles, the course proceeds by a discussion method employing questions, problems and cases to acquaint the student with the three broad problems of business.

1. The establishment of policies with the setting of goals.
2. The planning and setting up of an organization to carry out these policies in order to arrive at the goals.
3. The operating or managing of the organization itself.

Typical cases and situations are presented thru assigned readings, class discussion, and the text, whereby the student visualizes the functions of the business manager and executive.

The following subjects are considered: Field of business administration and management; conditions determining location of business; changing location; location planning; administration of personnel; measuring aids of personnel administration;

organization and administration of personnel department; administration of market problems; marketing forces, functions and structures; sales management and administration; the work of the purchasing department; administration of finance; the manager's relation to financial organization; financial policies and devices; organization for financial administration; the administration of production; manufacturing functions with reference to control; scientific shop management; character of business problems and business judgments; forms of business risk; ways of dealing with business risks; the form of the business unit; basic features of administration; essentials of organization and management; types of organization; principles of management; measuring aids of control; analysis of business cases.

Industrial Management B-3

Two hours each week during one semester. Credit, 2 semester hours.

This course deals particularly with directing the application of the forces of labor and machinery to materials for the efficient production of a commodity. The course presents to the student the fundamentals of industrial administration and management from the viewpoint of efficient production, contented workers, and service to the community. The following subjects are discussed and numerous problems to illustrate each subject are put before the class for solution: industrial organization; types of organization and departments; buildings and equipment; planning the product; handling of materials; inventory records; production control; labor management; the foreman; wages and incentives; the cost department; planning department; synchronizing sales and production.

The viewpoint of the average size industry is taken thruout this course from the fact that the student body represents on the average the medium size organization.

Personnel Management B-4

Two hours each week during one semester. Credit, 2 semester hours.

The purpose of this course is to clearly set forth the principles and the best prevailing practices in the field of the management and administration of human relations in business and industry. Administrators must deal with human beings whose tendencies, impulses, reactions, hopes and aspirations are being revealed by the study of human behavior. The administration of proper

personnel relationships is a major staff function and vitally affects the well-being of not only the workers but the organization as well.

Among the subjects considered are the following: The field of personnel administration; human values in business and industry; reasons for a personnel department; functions of a personnel department; sources of labor supply; methods of selection and placement; hours and working periods; health of the worker; a safety program; standards of physical working conditions; training executives; training employees; arousing interest in work; transfer and promotion; shop rules; grievances and discharge; job analysis and job specifications; supervision and control of job analysis; labor turnover; methods of factory labor analysis; labor audit check list; wage determination; payment plans and methods; industrial risks; co-ordination of staff departments; steady work; shop committee organization; employees' associations; business value of the collective bargain; employers' association; national industrial councils; industrial government.

Business Statistics B 5-6

Two hours each week thruout the year. Credit, 4 semester hours.

The prosperity of a business depends primarily upon the ability of the executive to anticipate the future. Today's commerce is in anticipation of tomorrow's requirements. An accurate appreciation of the developments that are likely to transpire in the ensuing months place a business man in a strategic position in the determination of the current policies of his business. To forecast the future, the executive must have before him a comprehensive view of the present as well as the essential facts of the past. Upon the analysis of statistics graphically presented in the form of charts, the executive can study results and trends; with their aid he can not only draw sound conclusions but is able to visualize his facts and conclusions to his associates and superiors. The following subjects are thoroly taken up in this course: collection, presentation, and analysis of data; indices of business conditions; business cycle; index numbers; correlation; use of graphs in presenting business data; statistics as applied to the sales, purchasing, production, accounting, and financial departments; use of statistics in budget control. Executive statistics and indices of fundamental business conditions are considered. Special attention is given to the use of statistics in presenting facts for policy making.

Business Management Problems B 7-8

Two hours each week thruout the year. Credit, 4 semester hours.

The tests of the principles of scientific organization and management are applied in this course to practical and fundamental problems in the administration and management of business and industrial enterprises. Thruout the course special attention is given to the determination of proper procedure, control, and policies. Fundamental weaknesses and difficulties experienced in various types of organizations are presented with the view of developing ability to analyze, present solutions and make recommendations for remedies. Problems used in this course are drawn from actual situations experienced in the management of typical businesses.

The following are some of the problems to be considered: the method of approach to business problems; the co-ordination of various departments; planning and production; standardization of processes; statistical records and reports; personnel and labor problems; function of the purchasing department; traffic and transportation problems; cost schedules and systems; distribution of overhead; budgetary control in relation to administration and management; anticipating business conditions thru estimates based upon statistical information; sales management in relation to the administration of the business; branch house operation; financial and credit problems; accounting organization and administration; duties of the executive; the executive and boards of control; analysis and interpretation of executive reports.

Retail Store Management M 3-4. (See Marketing.)

ENGLISH (E)

The business value that comes from the effective use of good English in reports and communications is being increasingly emphasized by business leaders. All regular students are required to pursue a systematic course in English. Those having outstanding deficiencies may be required to take additional preparation in English.

English A

Four hours each week during summer session of eight weeks. No degree credit. One unit's credit toward removal of academic conditions.

Students who do not show the ability to write clearly and concisely will be required to pursue and satisfactorily pass this course

in addition to all other requirements for the degree. The course is distinctly of college grade and undertakes to correct deficiencies in the training of students whose command of English is below standard and to adequately prepare such students for the more advanced courses.

The course gives practice in gathering and weighing material; the weighing and estimating of one authority against another; the use of books, magazine and library materials; the taking of notes on books and lectures; exposition, including a treatment of criticism and writing of reports and technical papers; argument and persuasion, including the preparation of briefs; paragraph and sentence structure; and the mechanics of composition.

Thruout the course the student will be given much practice in writing upon business subjects and problems.

Business English E-1

Two hours each week during one semester. Credit, 2 semester hours.

For the students of Accounting, this course stresses the business report, commercial description, clear exposition or explanation. It treats of certain technical phrases which accountants must use from accounting, business, and commercial law. Financial statements, balance sheets, letters of application, sales letters; sentence and paragraph structure — all are subordinated to clean, clear phrasing.

For the students of Administration, this course emphasizes the business report, clear exposition, sentence and paragraph structure. Equal stress is laid on the psychology of selling direct by mail, on the principles and practice of letters of application, credit, collection, adjustment. The sales letter receives close attention — the form, the diction, the controlling idea, the psychological appeals, follow-up methods.

Business Reports E-2

Two hours each week during one semester. Credit, 2 semester hours.

In all functions of administration and management, the business report is a practical necessity. The results of months of effort and work are frequently summed up in a report. The average business man, executive and junior accountant has given little thought and attention to the principles and practices of report writing and consequently many inefficient and half-developed reports are the result. A good report calls for a clear, forceful, and logical presentation of objective data, a conception of the conditions under

which it is to be used, and a careful and systematic analysis of the conditions in the light of the data.

This course will give major emphasis to the assembling of data; the planning and presentation of data; the form and display of a report; the construction of a report, the style of a report; the use of graphs and charts; use of opinions; drafting recommendations and conclusions; and the presentation of the report.

Thruout the course regular written assignments of report writing will be required. These reports must be outlined, carefully planned, and written in accordance with the basic laws of unity, coherence and emphasis. All papers and reports are read for the quality of the English and for the clearness of the presentation and organization of the material. These reports as assigned will cover the fields of accounting, marketing, and management, and will be based upon actual cases found in those fields.

ECONOMICS (Ec)

Economics is the basic foundation upon which the general principles of business as a science and profession rest. Mastery of the underlying economic laws as applied to business enables the student to see clearly the forces which business men must make use of in arriving at solutions of their problems. An appreciation and understanding of economics is a necessary factor in the equipment of the progressive business man of today.

Money and Banking Ec-1

Two hours each week during one semester. Credit, 2 semester hours.

A basic course presenting an understanding of the working principles of money and banking and their relationship to the operation and administration of business.

The following subjects are presented: pecuniary system in relation to economic and social standards; regulation of government currency; nature and functions of credit; financial structures; credit instruments; foreign investment trusts; stock exchanges; trust companies and modern financial system; functions of savings institutions; the operations of a commercial bank; financing of foreign trade; commercial banking system; commercial bank in relation to business cycles; government regulation of banking; the Federal Reserve System; the War and the Federal Reserve System; financial integration.

Business Finance Ec-2

Two hours each week during one semester. Credit, 2 semester hours.

The stability and success of nearly every business is dependent upon the accuracy and decisive judgment used in the management of its financial affairs. A study is made in this course of the financial policies involved in the organization and management of business and industrial enterprises, as follows:

Financial and general considerations involved in beginning a business; general methods of raising fixed capital; valuation of intangibles; financing changes in ownership; financing the expansion of development; financing doubtful undertakings; customer, employee, and co-operative ownership; borrowing from the bank; open market borrowing; use of the trade acceptance; miscellaneous methods of raising capital; financial aspects of purchasing goods; cost and finance; financial aspects of selling goods; the administration of earnings; financial involvements of adjustments, receiverships, bankruptcies, and reorganizations.

Investment Analysis Ec-3

Two hours each week during one semester. Credit, 2 semester hours.

This course covers the general field of investments emphasizing particularly the various classes of bonds and stocks and showing their relative merits, advantages and disadvantages and how the individual investor may best handle his investments. Thruout the course typical investment problems are presented for analysis and solution.

The course is outlined in co-operation and with the approval of the Investment Bankers' Association. The subjects are treated as follows: economics and investments; channels of investment; taxation and investment; government and municipal bonds; municipal financial statements; tax and debt limits; amortization; forms and rights of mortgages; real estate as security; mortgage debts and bonds; corporation securities; business and financial risks; dividends, fixed charges, earnings, and surpluses; corporation bonds; mathematical principles of bond investments; railroad and terminal bonds; public utility and industrial bonds; organization of the investment business; investment banking houses; work of the bond salesman; the operation of the stock exchanges; speculation.

Credits and Collections Ec 5-6

Two hours each week thruout the year. Credit, 4 semester hours.

This course is conducted in co-operation with the National Institute of Credit and the local Credit Men's Association. The purpose of this course is to consider credit as a phase of business management intimately related to the manufacturer, the merchant, the ultimate consumer — in fact every man who concerns himself with selling or buying commodities. This course will show the possibilities of the credit department as a factor in building the business upon a sound financial and managerial basis. Every business man, as well as credit men, should possess a thoro knowledge of these subjects:

Credit obligations; trade acceptance; financial statements; sources of information; collection correspondence; adjustments and causes of failure; credit insurance; retail credits; collection of retail accounts; bank credits; credit problems; collections; adjustment and extension; insolvency; bankruptcy; law and proceedings; proceedings of creditors; claims; discharge of bankruptcy; commercial ethics; distinguishing characteristics of a successful credit manager; the National Association of Credit Men.

BUSINESS LAW (L)

A knowledge of the principles of law such as is presented in the following courses will enable the business man to formulate sound and intelligent judgments in the solution of business problems. When legal counsel is needed, he will be in a position to sense that need. Courses 1, 2 and 3 are required of all students because of the value that the subject matter of these courses have to all lines of business. Course 4 is required of all preparing for the C.P.A. certificate.

Law of Contracts and Agency L-1

Two hours each week during one semester. Credit, 2 semester hours.

This course is designed to give the student a knowledge of the relationship existing between business and the law. Acquaintance with the basic principles of law as applied to business will help the business man to formulate sound plans, anticipate legal difficulties, and if necessary secure the needed legal advice and counsel.

The instruction aims to acquaint the student with the fundamentals of contractual relations in business as affected by various classes of contracts; offer and acceptance; consideration; validity of assent; construction; operation; legality; and discharge. In the study of agency attention is given to appointments of agents; ratification of an agreement with an agent; mutual rights and duties; authority of the agent; the liability of the agent to third parties; and how agencies may be terminated. Much of the work of this course is based upon cases and discussion of their relationship to business problems.

Law of Business Associations L-2

Two hours each week during one semester. Credit, 2 semester hours.

The association of men together in business enterprises is necessary and in many cases is largely the successful factor back of the enterprise. This course endeavors to acquaint the student with the legal factors involved in the forming of business associations.

The study of Partnership includes partnership contract; firm name; capital and property; mutual rights and obligations of partners; the partnership and third parties; and dissolution of partnership.

Corporation law takes up the consideration of the formation of the corporation; stock and the stockholders; directors and officers; powers of corporations; foreign corporations; and dissolution of corporations.

Sales and Commercial Papers L-3

Two hours each week during one semester. Credit, 2 semester hours.

The same purposes that underlie Course L-1 are kept before the student in this course. The student studies the application of law to business in a manner that makes the subject quite real to him as an asset in his training.

Bailments and Carriers embodies a study of the classes of bailees; rights and liabilities; bills of lading and warehouse receipts.

The study of Sales involves parties; subject matter; price; form; warranties; transfer of titles; rights of third parties; performances of contracts; and remedies of breach.

Consideration is given in Negotiable Instruments to the provisions affecting negotiability; consideration; acceptor; endorsements; payments; dishonor; protest and discharge.

Under Banks a study is made of the fundamental banking laws as related to business.

Law of Property, Bankruptcy and Suretyship L-4

Two hours each week during one semester. Credit, 2 semester hours.

Property acquaints the student with such considerations as the difference between real and personal property; law of fixtures, estates in real property; fee simple; life estates; landlord and tenant; estates in trust; mortgages; easements; title by deed; title by descent and devise; administration of estates; and conveyances.

In the study of Bankruptcy the purpose of the bankruptcy law and its effect upon business is studied. In addition, the following subjects are reviewed; acts of bankruptcy; voluntary and involuntary bankruptcy; receiver and trustee proof; claims; dividends; compositions; duties and rights of a bankrupt; his exemptions; and his discharge.

The study of Suretyship involves guaranty and surety bonds; liability of guarantors, and when they cannot be held; their rights after being held liable; surety bonds given by employees, trustees, corporations, and receivers.

MARKETING (M)

With the increased competition in manufacturing and distribution of commodities and the diversification of our buying habits, it is vitally necessary that the business executive know the facts about the product and the market channels thru which the various commodities flow in reaching the ultimate consumer. While the increased use of power machinery and the application of more scientific selling methods have somewhat reduced the cost of distribution, the complexity of our economic organization and wants as brot on by new conditions of living have on the other hand tended to increase marketing costs. Further reduction of these costs and greater efficiency of operation must be effected and can only be realized thru a scientific study and mastery of marketing functions and problems as basic elements in business administration.

Marketing Problems M 1-2

Two hours each week thruout the year. Credit, 4 semester hours.

A study is made of the fundamental factors, the methods and the problems connected with the marketing of raw and manufactured products. This includes a study of the commodities, the markets, the trade channels, the distributive forces, the price-

determining factors, and the trade organizations. Practical problems are given the student so that he may gain experience in working out the best methods of marketing various commodities. The point of view of the manufacturer who has goods to sell is taken and an analysis is made of the existing channels and means by which these various commodities may be most effectively and advantageously moved. The topics considered are: the consumer's point of view; retail trade; wholesale trade; materials, equipments, and supplies; sales management; brands; trade marks and advertising; sales correspondence; price policies. In connection with the above topics, considerable attention is given to marketing policies, trade information, trade channels, and the functioning of marketing organizations. The course is conducted entirely as a problem course. Students are required to work upon typical problems drawn from the marketing and merchandising field.

Retail Store Management M 3-4

Two hours each week thruout the year. Credit, 4 semester hours.

This course aims to present by means of carefully selected cases the management problems arising in the operation of a retail store. Emphasis is given to three major types of retail store, namely, the department store, the small retail store, and the chain store. The problems and cases are selected with a view of bringing out the important factors in retailing and to illustrate the application of recognized principles to merchandising and store management.

The following subjects are treated: store location; layout; organization and equipment; selling problems, such as, advertising, display, supervision of sales force, credit, returns and allowances, delivery, complaints and adjustments, and personal service; personnel problems of executives and non-executives; training and education of staff; stock problems, including transportation, receiving, marking, reserve stock, stock records, and inventories; statistics in selling, stock, buying, personnel, financial and general operating; buying problems such as organization, plans, sources, methods, terms and discounts; accounting problems involving classification of accounts and distribution of operating expenses; administrative problems, such as price policies, merchandise classification, stock control, insurance, taxation, finances, and executive functions.

Advertising Principles M-5

Two hours each week during one semester. Credit, 2 semester hours.

This course is (1) for those who are interested in advertising as a profession; (2) for advertising men who need to perfect their knowledge of the field and qualify for advancement; (3) for merchants and others engaged in distribution who wish to co-ordinate their selling plans with advertising; (4) for business or professional men who wish to apply the principles of advertising to their own business.

The course embraces a study of the following topics: problems and scope of advertising; place of advertising in business; analysis of the problem; methods of investigation for facts and data; analysis and selection of appeals; determining the value of appeals thru the analysis of human nature and by field tests; sex and class differences; suggestive advertising; argumentative advertising; truth in advertising; headlines; illustrations; size of advertisements; color; layout and typography; trade-marks; packages, cartons, and labels; consideration of mediums; magazines; newspapers; direct mail materials; street car cards; posters and miscellaneous mediums; special fields of advertising such as national, retail, foreign and financial advertising.

Sales and Advertising Campaigns M-6

Two hours each week during one semester. Credit, 2 semester hours.

The aim of this course is to present sales and advertising management in an intensive manner. Modern sales and advertising campaigns are carefully studied and analyzed as problems confronting the executive. Thruout the course the student will be required to present carefully worked out plans for specific campaigns of marketing.

Emphasis is placed upon such practical problems as selecting and training a sales force; sales personnel administration; sales budgeting; promotion of sales and advertising policies; planning layout and operation of campaigns; use of statistics and analysis research; market analysis.

Salesmanship M-7

Two hours each week during one semester. Credit, 2 semester hours.

This course shows the student (1) how to apply sales principles; (2) how to solve sales problems in wholesale, retail and specialty fields; (3) how to handle selling difficulties; (4) how to apply a knowledge of human nature to business problems; (5) how to cultivate a strong and interesting personality; (6) the application

of psychology to sales conditions. Much attention is given in the course to the personal development of the salesman, methods of developing for analyzing the goods, the buyer, the field of work, and the sales processes.

The following is a brief outline of the course: the psychology of selling; factors in selling; knowing the goods; analyzing human nature; planning the sales talk and approach; winning the customer's confidence; obtaining an audience; arousing the customer's interest; creating desire; securing favorable decision and action; handling objections; closing the sale; and holding the trade. Much attention thruout the course is given to the problems of personal development of the student from the viewpoint of his becoming an effective salesman and in selling his services.

Life Insurance Underwriting M-8

Four hours each week during one semester. Credit, 4 semester hours.

The main purpose of this course is to train men in the essentials of Life Insurance service and selling. The course has been prepared by members of the Educational Committee of the National Association of Life Insurance Underwriters and has the approval of the National Association, the Canadian Life Insurance Underwriters and the local Association of Life Insurance Underwriters. (A special folder fully describing the course will be sent upon request.)

The course is so arranged that it logically divides into two parts; first, the presentation of principles and methods followed by discussion; and second, the presentation, analysis and solution of problems illustrating the principles and methods. The principles considered are: life insurance salesmanship; human needs; the life underwriter; insurance for needs; amount of life insurance to carry; insurance survey; insurance estate; the pre-approach; the approach; ordinary life insurance; technique of approach; non-forfeiture; managing the interview; overhead expenses; methods of appeal; surplus and dividends; annuities; selling plans; contract policies; the application; meeting objections; the ordinary life; answering objections; non-forfeiture of values; the close; dividends; closing suggestions; limited payment, endowment and term policies, service of policy; life policy problem.

The problem aspect of the course embodies 32 different problems, taking into consideration: methods of prospecting; budgeting; making approaches; organizing and presenting selling interviews; outline of addresses; computation of mortality; saving and annuity funds; handling and meeting objections; etc.

RULES AND REGULATIONS

THE SCHOOL YEAR

The school year is thirty-four weeks in length, exclusive of the time allowed for vacation, and is divided into two semesters of seventeen weeks each. The last week of each semester is devoted to examinations.

ATTENDANCE REQUIREMENTS

1. The student must attend at least one-half of the sessions in a course in order to be permitted to take the final examination therein.
2. If the student attends at least 75% of the sessions in a course, he is entitled to take the final examination therein and will pass if he attains a grade of D- (60%) in the final examination.
3. If the student attends between 50% and 75% of the sessions in a course, he must furnish satisfactory excuse to the Committee on Attendance for the absence under 75% attendance in order to be permitted to take the final examination therein and, further, he must attain a grade of C- (70%) in the final examination in order to pass in such course or courses.
4. A student must have an aggregate attendance of at least two-thirds of all sessions scheduled for him in a given year in order to be enrolled the year following as a regular student.
5. A student must have an aggregate attendance of at least two-thirds of all sessions scheduled for him in his entire curriculum in order to qualify in attendance for his degree. No exception is made to this rule.
6. In order to receive credit for attendance at a session, a student must be present in the classroom during the entire period unless, upon satisfactory excuse, his presence for a shorter period is accepted by the Committee on Attendance.

HOME WORK — CURRENT AND LATE

1. Home work turned in late will be graded down: (a) for one week late or fraction of a week, 10% will be deducted; (b) for work from eight days to two weeks late, 20% will be deducted; (c) for work from fifteen days to four weeks late, 30% will be deducted.

2. Home work will not be accepted after the fourth week from the original date on which the work was due, and it will count as zero.

3. The School will not accept incomplete work. The full assignment for a specific date is to be turned in.

4. All late work is to be turned in at the Office and not to Instructors and Monitors. The person in charge will give a receipt, and file a duplicate.

5. Not less than 10% nor more than 30% will be deducted from an assignment lacking form, arrangement, structure, and good spelling. Students persistently doing poor work in this respect will be required to complete additional study in English composition.

EXAMINATIONS

1. Final examinations are required upon completion of all courses.

2. Mid-year examinations are required at the close of the first semester in all full-year courses.

3. *Under no circumstances will special examinations be given in any course.* Students desiring to take examinations must either take the regular scheduled examinations at the end of each course, or the regular make-up examinations as scheduled.

4. One make-up examination is allowed for the final examination in each course and is regularly given every year, those in Senior subjects in the spring and those in Junior, Sophomore and Freshman subjects in September. For those who fail to take or fail to pass the final examination in a semester course at mid-years, a make-up examination will be given within one month after the grades are reported. A student may take as a make-up any final examination corresponding to the one in which he has failed.

5. Make-up examinations for those who fail in mid-year examinations will be provided within one month after the grades are reported. Students failing to take a mid-year examination or an examination at the make-up period will be given a grade of zero (0) for the mid-year examination.

6. The examination grade of a full-year course is determined by counting the mid-year examination as one-third and the final examination, which will be a comprehensive examination covering the whole year's work, as two-thirds.

7. No student will be permitted to pass in any course unless he has received a passing grade in both the final examination and

the average of his term work. This applies regardless of the average of the final examination grade and the term work grade.

8. A student who has failed in a course must remove his condition not later than September of the year following that in which his failure occurs.

9. A student who fails in a final examination in a given course receives credit for only 60 per cent in the make-up even if he obtains a higher grade in the make-up examination.

10. Failure on the make-up examination or in the term work requires the student to repeat the course involved in its entirety.

11. The receipt of a passing mark in a course precludes a student from another examination therein.

12. If a student for good cause does not take a final or mid-year examination, he may take it at the next scheduled examination in the subject and receive credit as for a first examination.

13. For each make-up examination taken by students who either have failed to take or have previously failed the corresponding examination, a fee of two dollars (\$2.00) is charged — payable in advance. A receipt must be presented to the person in charge of the examination.

14. Mid-year examination books and papers may be returned to the students at the discretion of the instructor. Final examination books are not returned, but may be seen at the office not later than one month after grades have been sent out.

TESTS

1. Each class test not taken by a student will count as zero. Make-up tests may be given at the discretion of the instructor.

2. On each test failed the student will receive the grade given.

3. Make-up tests for the purpose of raising grades are not permitted.

REMOVAL OF CONDITIONS

1. No credit is given in the same subject toward removal of entrance conditions and completion of credits toward the B.C.S. degree.

2. Any student who fails to pass a sufficient number of courses during two successive years may be dropped from the School or required to meet such conditions as are deemed advisable by the Committee on Administration.

3. No student who fails on account of School of Commerce and

Finance conditions to receive his degree in due course, will be permitted to remove his conditions and receive his degree later than two years after the graduation of his regular class, except by special authorization.

4. Repeating any course involves complete repetition, as if the work were being taken for the first time.

5. Upon the student rests the responsibility of ascertaining whether he has either academic or collegiate conditions and what must be done to remove them.

GRADES

1. The following system of grading is in use:

A	Excellent	D	Pass
B	Good	F	Failure
C	Fair		

2. Deficiency reports are issued twice a year, on or about December 1, and April 1.

3. Grade reports are mailed to the students from the office of the Dean or of the Educational Director in charge of the Division. Under no circumstances are grades given out over the telephone.

PROMOTION

1. A student cannot be regularly classified as a Senior unless, at the opening of his senior year he has removed all entrance conditions and has credit for thirty-four semester hours of academic work exclusive of credit for business experience.

2. Sophomores may be promoted to the Junior class, if they do not have Freshman conditions, and provided they do not have Sophomore conditions exceeding four semester hours.

GENERAL INFORMATION

HISTORY OF NORTHEASTERN UNIVERSITY

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896 that the actual foundations for the University were laid. The larger number of courses offered required a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree-granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering was opened in 1909 and given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, and Bachelor of Chemical Engineering. The School of Business Administration was opened in September, 1922, and has the right to grant the degree of Bachelor of Business Administration. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, the Automotive School, and the Vocational Institute are conducted under the administration of the University. In March, 1923, the University was granted general degree-granting power by the Massachusetts Legislature. Divisions of the University offering evening instruction have been established at Worcester, Springfield, Bridgeport, New Haven and Providence.

LIBRARIES

1. The students of the School in Boston have available for their use the reference library of the University, consisting of several thousand carefully selected volumes. In this library are necessary books on business administration, accounting, marketing,

and industrial management for the use of the students of the School. The generally library of the Boston Y.M.C.A. is available for student use. Current business periodicals and the leading business services are also provided. The reading rooms of the library are open from 9:00 A.M. to 10:00 P.M. daily.

In the Divisions at Worcester, Springfield and Providence small libraries are being built up with the most modern books upon business subjects.

2. All members of the School in Boston, whether resident or non-resident students, have the privilege of taking books from the Boston Public Library and of using the Library for general reference and reading. The same privilege is accorded the students of the Divisions for the use of the Libraries in their respective cities.

EXPENSES FOR BOOKS AND MATERIALS

The expenses for books and materials varies according to the course or group of subjects taken. The minimum is approximately \$3 and the maximum about \$20 for a year.

NOTIFY THE OFFICE IMMEDIATELY

1. Of change of address.
2. Of withdrawal from any course — otherwise the fee for that course will be charged.
3. Of withdrawal from the school, giving date of the last lecture attended.

THE Y. M. C. A.

Northeastern University is conducted by the Young Men's Christian Association and, though non-sectarian, is thoroughly Christian in character. Students are encouraged to participate in the activities of the Association so far as is consistent with their own particular religious beliefs. However, a student should not hesitate about entering the school because of religious faith, no attempt being made to influence one to participate in activities which are contrary to the tenets of his particular religion.

RELIGIOUS ACTIVITIES

Students are cordially welcomed and urged to participate in all the activities of the Y.M.C.A.— it is hoped that they will feel

free to do so to the largest extent possible. In connection with the various departments of each Association, an ample social and religious program is provided, so that all men should be able to find that type of activity in which they are most interested. Full information may be received on inquiry.

SCHOOL ACTIVITIES

The worthwhileness of wholesome social activities among students is recognized by the school authorities, and students are encouraged to form organizations which will stimulate the best types of social activities. The evening school student naturally finds the time which he can give to activities outside of his required work limited, and for this reason his program of activities must be selected with care and judgment.

EMPLOYMENT SERVICE

While the School does not definitely promise employment, every effort is made to render the most effective type of service, to students and alumni alike. This phase of service is in charge of the School office and all requests for placement or men to fill positions should be referred to the office. In Boston the Alumni Association co-operates with the School authorities in handling the placement work.

BUILDINGS

The School of Commerce and Finance is housed in the Y.M.C.A. buildings in Boston, Worcester, Springfield, Providence, New Haven, and Bridgeport. The locations of these splendid facilities are convenient in all cases to main lines of transportation and are in or near the heart of the business centers of these cities.

PHYSICAL TRAINING

Each building has excellent facilities in the nature of gymnasiums, swimming pools, and other recreative privileges. School of Commerce and Finance men are urged to avail themselves of the opportunities for physical training. Men who are employed in office or indoor occupations and who are pursuing a strenuous

evening program of training and study should plan to take some adequate and systematic form of exercise in order that they may not impair their health and that they may do the most effective work.

REDUCED GYMNASIUM RATES TO STUDENTS

In order to bring the use of the gymnasium within the means of every student, special reduced rates are granted.

OTHER RECREATIVE OPPORTUNITIES

Other recreative opportunities of widely varied nature are offered in the form of billiard rooms, libraries, game rooms, social rooms, etc. The Y.M.C.A.'s in which the School is located are equipped for almost every type of clean, virile, and wholesome activity of interest to men.

ALUMNI CLUBS

Northeastern University Club.

The Northeastern University Club of Boston was organized in the spring of 1921 with graduates of the Schools of Law, Commerce and Finance, and Engineering as charter members.

The purpose of the Club is to promote social activities among the alumni of Northeastern University; to perpetuate the Northeastern spirit in the business life of the community; to give to their Alma Mater the benefit of the experience of the alumni in the School and in business and professional activities since their graduation.

Any man of good character, twenty-one years of age or over, who is a graduate of any of the schools of Northeastern University granting a degree, or who has attended such schools for a period of two full years, is eligible for membership.

Alumni Association (Boston)

The Alumni Association of the School of Commerce and Finance sustains a vital interest in the School and the work of the University. Membership is open to any graduate of the School. A number of social and fellowship gatherings are held each year. The *Alumni News Bulletin* is issued each month and carries items of general interest to all alumni.

GRADUATES OF THE SCHOOL OF COMMERCE AND FINANCE

1914 — BACHELOR OF COMMERCIAL SCIENCE

Daniel Asher, B.S., LL.B., Worcester	Edgar P. Hawes, Roslindale
*Thomas H. Burton, Winchester	Raymond O. Keating, Woburn
Einar W. Christenson, C.P.A. (N.H.), Arlington	Joseph A. Kuebler, Winthrop
George S. Clarkson, C.P.A. (Mass. and N.H.), Roxbury	*William J. Lyons, Boston
William S. Cooper, Medford	William J. Magee, C.P.A. (Mass.), Boston
Charles H. Cornell, C.P.A. (Mass.), Chelsea	Harvard L. Mann, C.P.A. (Mass.), East Dedham
William B. Cushing, Newton	Harold J. Parsons, A.A., Worcester
Frederick W. Davison, Dorchester	Abijah Pearson, Roxbury
William L. Esterberg, C.P.A. (Mass.), Reading	Isaac Rich, Roxbury
Herbert Fallon, Dorchester	Charles F. Rittenhouse, C.P.A. (Mass. and N.H.), Jamaica Plain
Harry H. Ferngold, East Boston	William D. Smith, C.P.A. (Mass.), Dorchester
Herbert C. Fraser, Watertown	Walter F. Spinney, C.P.A. (Mass.), Allston
*Benjamin W. Fuller, Milton	Maurice B. Spinoza, Roxbury
Guy L. Harvey, Boston	*Charles E. Stearns, C.P.A. (Mass.), Boston
	Robert M. Taylor, West Somerville

1915 — BACHELOR OF COMMERCIAL SCIENCE

Clarence E. Akerstrom, Medford	Myron F. Lord, Dorchester
Benjamin Asher, Worcester	Ralph C. MacDonald, Walpole
Robert Bruce, Everett	William A. Mansfield, Somerville
Philip F. Clapp, C.P.A. (Mass. and N. H.), Roxbury	Frank L. McCarthy, Arlington
Wilfred A. Clark, Medford	Edwin E. McConnell, C.P.A. (N.H.), Hyde Park
Casper Cohen, C.P.A. (Mass.), Chelsea	Lester C. Nutting, West Roxbury
James B. Conway, Boston	Herbert L. Perry, West Somerville
Albert B. Curtis, Roxbury	James C. Purinton, B.B.A., Beverly
Royal M. Cutler, C.P.A. (N.H.), Brockton	Edward C. Richardson, Waltham
Willis H. Doe, C.P.A. (N.H.), Medford	James F. Rockett, Boston
Henry T. Dolan, Salem	William W. Sharpe, Forest Hills
Clifton W. Gregg, C.P.A. (N.H. and Mass.), Beverly	Dale M. Spark, C.P.A. (Mass.), Dorchester
Milburn D. Hill, Salem	Ralph G. Stetson, Boston
Edward I. Hollander, Chestnut Hill	Frank J. Sullivan, South Boston
Robert H. Hunter, Dorchester	Dana S. Sylvester, LL.B., Brookline
Edward S. Jenkins, Quincy	William E. Tierney, Lawrence
*Irving E. Jones, Brighton	*Earle P. Tyler, Everett
James S. Kennedy, Everett	Bruce R. Ware, C.P.A. (N.H.), Newton
Martin C. Lee, South Boston	Leo Wasserman, C.P.A. (Mass.), Roxbury
John C. Lord, Brookline	William H. Wheeler, Somerville
	Carl W. Wright, C.P.A. (Mass.), Somerville

1915 — MASTER OF COMMERCIAL SCIENCE

William S. Cooper, B.C.S., Medford	William J. Lyons, B.C.S., Boston
Charles H. Cornell, B.C.S., M.B.A., C.P.A., Chelsea	Harvard L. Mann, B.C.S., C.P.A., East Dedham
Herbert Fallon, B.C.S., Dorchester	Isaac Rich, B.C.S., Roxbury
Harry J. Ferngold, B.C.S., East Boston	William D. Smith, B.C.S., C.P.A., Dorchester
Herbert C. Fraser, B.C.S., Watertown	Maurice B. Spinoza, B.C.S., Roxbury
Joseph A. Kuebler, B.C.S., Winthrop	*Charles E. Stearns, B.C.S., C.P.A., Boston

*Deceased.

1916 — BACHELOR OF COMMERCIAL SCIENCE

John B. Andrews, South Framingham
Herbert J. Ball, S.B., Lowell
Ronald B. Chipchase, Melrose
James P. Dillon, South Braintree
*Loren N. Downs, Jr., S.B., Boston
Howard B. Hall, Boston
Harry I. Kessler, Roxbury
Charles Lee, East Boston
Joseph Levine, C.P.A. (Mass.) Dorchester
Claude R. Marvin, Boston

Frederick C. Rivinius, East Weymouth
Clarence B. E. Rosen, B.B.A., M.B.A.
C.P.A. (Mass. and N.H.), Jamaica Plain
Joseph S. Snow, C.P.A. (Mass.), Boston
Harry W. Thomas, Melrose
Alfred T. Timayenis, Revere
Franklyn P. Trube, Winthrop
William H. Walpole, Winthrop
Gardner B. Wardwell, C.P.A. (Mass.), Melrose
Charles A. Wight, Jr., C.P.A., (Mass.), Belmont

1916 — MASTER OF COMMERCIAL SCIENCE

Robert Bruce, B.C.S., Everett

Herbert L. Perry, B.C.S., West Somerville

1917 — BACHELOR OF COMMERCIAL SCIENCE

Max Abelman, Roxbury
Walter G. Ambrose, Boston
Paul A. Anderson, Dorchester
Hyman Berkowitz, Roxbury
Alfred L. Billings, Arlington
Samuel Bischoff, C.P.A. (N.H.), Dorchester
Elbridge A. Bollong, C.P.A. (Mass. and N.H.), Allston
Charles I. Boynton, Boston
Benjamin G. Brooker, C.P.A. (Mass. and N.H.), Dorchester
George G. Caldwell, Mattapan
Richard B. Capstick, Anburndale
Benjamin A. Carlson, Allston
Henry I. F. Carney, Somerville
Carlton N. Chandler, C.P.A. (Mass.), Marion, O.
William F. Chaplin, Cambridge
Ira M. Conant, A.B., C.P.A. (Mass. and N.H.), Boston
Michael Edelstein, Boston
John C. Farrington, C.P.A. (N.H.), Lowell
Paul Fishman, Roxbury
James J. Fox, C.P.A. (Mass. and N.H.), Boston
Charles Gale, C.P.A. (Mass. and N.H.), Dorchester
Jack M. Gordon, Malden
James A. Grant, Lowell

Clifford E. Guild, Mansfield
Fred D. Harrington, C.P.A. (Mass.), Somerville
Effinger E. Hartline, Washington, D.C.
Simon Helman, C.P.A. (Mass.), Dorchester
Walter G. Hill, A.B., Jamaica Plain
George L. Hoffacker, Boston [bridge
Arthur H. Holmberg, C.P.A. (N.H.), Cambridge
James T. Johnson, Jr., C.P.A. (Mass.), Waltham
Leonard L. Kabler, Roxbury
Reuben Kaplan, Boston
Max Katz, Dorchester
George A. Lange, Jamaica Plain
*Charles C. MacLean, Cambridge
Elmer A. Merriam, LL.B., West Roxbury
Robert Pillow, Allston [chester
*Abraham N. Radler, C.P.A. (N.H.), Dorchester
John A. Ryan, C.P.A. (Mass.), Lynn
James A. Saunders, C.P.A. (Mass.), Brighton
Louis I. Shulinski, Worcester
Nathaniel F. Silsbee, C.P.A. (N.H.), Dorchester
Stanton S. Skolfield, Boston
Samuel J. Stone, C.P.A. (Mass. and N.H.), Roxbury
*Francis B. Southwick, C.P.A. (N.H.), Waban
Warren E. Westcott, Melrose
Herbert F. Whitmore, Arlington Heights

1918 — BACHELOR OF COMMERCIAL SCIENCE

Reginald Amback, C.P.A. (N.H.), Roxbury
Abraham Annapolsky, Winthrop
Walter H. Apperson, Medford
Ralph S. Bell, South Boston
Louis J. Birger, Dorchester
Ernest H. Brooke, Dedham
Arthur M. Brown, Watertown
Arnold D. Brundage, Salem
Clarence G. Chapin, Cambridge
*Ernest R. Ciriack, C.P.A. (Mass.), Jamaica Plain

Joseph B. Cohen, C.P.A. (Mass. and N.H.), Worcester
Dennis P. Crimmins, Worcester
Paul E. Crocker, Dorchester
Percy E. Darling, Melrose
George A. Dempsey, Salem
Joseph A. Dudley, West Somerville
Frank C. Fogg, Dorchester Center
James O. Foss, A.B., Boston
Louis Friedman, Worcester
George Hansen, Dorchester

*Deceased.

Maxwell Harris, Dorchester
 *W. Clark Haywood, Salem
 Irving E. Heymer, C.P.A. (N.H.), Auburndale
 Joseph Hinchey, Melrose
 Philip Isenman, Malden
 Percival Lantz, Dorchester
 Albert A. Lappin, Dorchester
 William W. Lee, Danvers
 Alfred B. Mahoney, Somerville
 Walter J. Mahoney, Worcester
 Edward J. McDevitt, Jr., C.P.A. (Mass.),
 Charlestown
 J. H. Melzard, Jr. Hyde Park
 Edward F. Messinger, Roxbury
 Frederic Mitchell, Malden
 Arthur R. Morse, Andover
 Leroy C. Murch, Beverly
 William A. Murphy, Jamaica Plain
 Walter P. Nichols, Melrose
 Thomas A. O'Connell, Boston
 Henry Osberg, Malden
 Arthur T. Partington, Winthrop
 Oliver H. O. Pearce, Malden

Ralph W. Peters, A.B., C.P.A. (Mass.),
 Auburndale
 Warren W. Petrie, Hyde Park
 Henry A. Plett, South Boston
 Leroy A. Prull, C.P.A. (Mass. and N.H.),
 Dorchester
 Neal D. Randall, Melrose Highlands
 Norman B. Reed, Melrose
 Joseph G. Riesman, Chelsea
 Louis J. Rosenthal, Roxbury [Chelsea
 George J. Saievetz, C.P.A. (N.H. and Mass.),
 Royal Shawcross, Boston
 William J. Shield, C.P.A. (N.H.), Medford
 Herbert W. Simmons, C.P.A. (Mass.), Lynn
 Frank Solomon, C.P.A. (Mass. and N.H.),
 Roxbury
 Harry F. Standley, Beverly
 Nathan Stern, Boston
 J. H. Stewart, C.P.A. (Mass.), East Boston
 Francis F. Vogel, Roxbury
 George F. Wagner, Lowell
 Raymond W. Willard, C.P.A. (Mass.), Concord
 Frank H. Wrigley, Quincy

1918 — MASTER OF COMMERCIAL SCIENCE

Harry I. Kessler, B.C.S., Dorchester

1919 — BACHELOR OF COMMERCIAL SCIENCE

John M. Ayer, Brighton
 Harry D. Barr, Medway
 Karl H. Becker, C.P.A. (N.H.), Roslindale
 Paul G. H. Brueckner, Jamaica Plain
 Dennis F. Casey, Dorchester
 Ernest T. Craig, Brookline
 Jeremiah P. Cronin, Beverly
 Lawrence Davis, Roslindale
 Kenneth T. Dillon, Mattapan
 *Arthur C. Evert, Chelsea
 Robert A. Fopiano, Everett
 Rudolph Gfroerer, Dorchester
 Maurice Goldberg, Malden
 Barry J. Goldings, Roxbury
 Austin D. Hall, Cambridge
 William E. Hayes, C.P.A. (Mass.), Lynn
 Otis E. Johnson, Malden
 George L. Kilgore, Waltham
 Samuel A. Kline, Dorchester

Benjamin Koslofsky, Dorchester
 Hyman Landsman, Chelsea
 John M. Lund, Roxbury
 John F. McDevitt, Charlestown
 Thomas A. Milne, Arlington
 Edward P. Mock, Woburn
 Daniel J. O'Brien, Boston
 Harold F. Phillips, Dorchester
 John F. Riordan, Roslindale
 Mitchell Rosenfield, Revere
 Morris Rosenthal, Roxbury
 Nathan Rotfort, C.P.A. (Mass.), Chelsea
 Frank P. Schaffer, Malden
 Harold O. Smith, Lynn
 Arthur L. Tobin, Salem
 John W. Totten, Norwood
 Ralph W. Watson, C.P.A. (Mass. and N.H.),
 West Medford
 John E. Willis, North Andover

1920 — BACHELOR OF COMMERCIAL SCIENCE

BOSTON

Edwin S. Anderson, Medford
 Martin J. Anderson, Gloucester
 Walter G. Arnold, Arlington
 Frederick M. Bassett, Boston
 Henry A. Beyer, Jamaica Plain
 John T. Bogrette, Medford

George J. Breen, Norwood
 Curthland C. Brown, Wenham
 John J. Buler, Dorchester
 Walter F. Burke, South Boston
 Harry Chalfin, Canton
 John H. Cleary, Jr., Charlestown

*Deceased.

Samuel Cohen, Boston
 James F. Cullen, Roxbury
 Tracy A. Dibble, C.P.A. (N.H., Mass. and Maine), Lynn
 George N. Dill, Belmont
 Arthur J. Dolan, Roxbury
 Jesse F. Dolloff, Winthrop
 John J. Donahue, Charlestown
 Robert W. F. Eagle, North Andover
 Anton Eck, Dorchester
 Israel W. Ephross, Boston
 Louis A. Estrach, Chelsea
 Frank J. Farrey, C.P.A. (Mass.), North Woburn
 Francis P. Fleming, Waltham
 Lawrence E. Foster, Beverly
 Max Gidez, Boston
 Murdoch J. Gillis, Jr., Roslindale
 John Goldberg, Roxbury
 George Goldstein, Malden
 Sidney Guttentag, C.P.A. (Mass. and N.H.), Dorchester
 Francis J. Harrigan, C.P.A. (Mass.), Des Moines, Ia.
 John W. Higgins, Jr., Rockland
 Richard F. Hingston, C.P.A. (Mass.), Lynn
 Laurence M. Johnson, Lynn
 Philip W. Johnson, C.P.A. (Mass.), Medford Hillside
 Clifford L. Jordan, Dorchester

Edward A. Kane, Malden
 Clarence V. Kenrick, Medford
 Edwin H. King, Boston
 Harris S. Knight, C.P.A. (N.H., Mass. and Maine), Salem
 Louis Kremer, Haverhill
 Wilfred B. Maynard, Lowell
 George McEwan, Jr., Winthrop
 Percy M. McIntosh, Lowell
 Nathan Milgroom, Roxbury
 Frederick A. Mock, Jamaica Plain
 B. J. P. Morrison, Everett
 George Murphy, LL.B., C.P.A. (N.H. and Mass.), Lowell
 Herbert J. Nolan, Dorchester
 Herman Olson, Dorchester
 Robinson S. Parlin, Watertown
 Saul O. Perlmutter, East Boston
 Harry W. Prout, Brighton
 Alonzo Putnam, Jr., Lowell
 Samuel Rapoport, Boston
 William F. Richstein, Natick
 Israel Scolnick, Dorchester
 Samuel M. Seif, Dorchester
 Arthur F. Smith, Lowell
 Sprague R. Whitney, Winthrop
 Edward W. Wright, C.P.A. (Mass.), North Attleboro
 Kostas C. Yerontitis, Boston

WORCESTER DIVISION

Ernest P. Cotton, Worcester
 Samuel Z. Cramer, Worcester
 Harry W. LaDuke, Worcester [Worcester
 Bartholomew J. Murphy, C.P.A. (Mass.),

Charles W. Parks, Worcester
 A. Oscar Price, Worcester
 Lester K. Sweeny, Worcester
 Charles R. White, Worcester

1921 — BACHELOR OF COMMERCIAL SCIENCE BOSTON

Arthur H. Attlebury, Revere
 Spence C. Babbitt, Wollaston
 Ernest W. Beals, Roxbury
 Irving R. Beiman, Malden
 Emory J. Bolas, Easthampton
 Allen W. Bryson, Chelsea
 Charles K. Burnham, Braintree
 Aaron Caditz, Haverhill
 William Claff, Malden
 Eugene H. Clark, Medford
 Ralph J. Cohen, Dorchester
 Norman E. Dizer, East Weymouth
 Max Elkon, Winthrop
 George H. Fickeisen, Roxbury
 Frederick H. Fletcher, Waltham
 Daniel L. Freedman, Boston
 Hyman H. Goldstein, Boston
 Morris Goodman, C.P.A. (Mass.), Roxbury
 Finley M. Gray, Lowell

Charles W. Grinnell, West Somerville
 Harold A. Haigh, Methuen
 Harry N. Hartman, Boston
 James M. Haynes, South Boston
 Charles S. Hobert, Chelsea
 Alwyn G. Hole, Boston
 Lester D. Hurd, Boston
 Joseph Jacobs, Dorchester
 Louis I. Jones, Dorchester
 Louis Kaplan, Boston
 Abraham Karp, Boston
 Louis Lederman, Dorchester
 Harold J. Lefkowitz, Roxbury
 Israel A. Levin, Roxbury
 Harry E. Levine, Springfield
 Julius Levine, Boston
 Harry L. Littlehale, Tyngsboro
 Abraham H. Mamis, Providence
 Frank W. McCafferty, Cambridge

*Deceased.

W. Robert McLees, New York
 Arthur Milgroom, Chelsea
 John E. B. Munn, Roslindale
 Bernard F. O'Neil, South Boston
 George R. O'Neil, Lowell
 John W. Ormsby, Wollaston
 Carl A. Page, Lexington
 James F. Patten, West Somerville
 William L. Paul, Dorchester
 Adolph G. Plett, South Boston
 Daniel P. Pousland, Boston
 Francis J. Quinn, Lowell
 Louis P. Rabinovitz, Dorchester

Moses Rosenthal, Boston
 Lewis F. Sawyer, Lawrence
 Benjamin L. Schwab, Hyde Park
 Samuel B. Snow, Malden
 Max Starr, C.P.A. (Mass.), Boston
 Raymond L. Strangford, Revere
 Percy W. Taylor, C.P.A. (Mass.), Medford
 Frederick J. Venner, Lowell
 Harry A. Waitt, Quincy
 Gardner B. Wardwell, C.P.A. (Mass.), Melrose
 Benjamin R. Warshaw, Boston
 Myron F. Welsch, Allston
 Raymond L. White, Somerville

WORCESTER DIVISION

Ralph R. Bradley, Worcester
 Joseph P. Braheney, Worcester
 Philip H. Hensel, Worcester
 Richard J. Hoey, Worcester
 Walter G. Irvine, Worcester

Benjamin Jackson, Worcester
 Alexander G. Lajoie, Worcester
 John C. Quinn, Worcester
 Fred E. Wilcock, Worcester

1922 — BACHELOR OF COMMERCIAL SCIENCE

Boston

Harold N. Anderson, Arlington
 Charles D. Aznavoor, Medford
 John A. Barry, East Boston
 Julius L. Berenson, Boston
 Ernest A. Berg, Everett
 Frederick A. Beyer, Jamaica Plain
 Chester D. Black, Somerville
 Ralph P. Bowers, Woburn
 Savory C. Braley, Hyde Park
 Walter E. Brown, Boston
 William R. Browne, Boston
 Nahum J. Busby, Jr., Melrose
 John W. Connelly, Dorchester
 Oscar M. Dahlstrom, Arlington
 Herbert B. Dowse, Dorchester
 Frederick A. Farrey, North Woburn
 Thomas F. Fuller, Wollaston
 Francisco F. Garcia, Roxbury
 Chester L. Garland, Cambridge
 James P. Goodhue, Dorchester
 Morris Gorin, Dorchester
 John W. Gorman, Roxbury
 John F. Green, Roslindale
 John W. Hansen, Malden
 Ernest E. Harrison, East Saugus
 John F. Hartnett, Woburn
 Edward B. Havey, Roslindale
 John J. Hayes, South Boston
 Ernest T. Hayward, Dorchester
 Sherwin E. Hubbard, Roslindale
 Hollis A. Johnson, Atlantic
 Orrin F. Jones, Boston
 Walter W. Keiler, West Roxbury
 James H. Kelleher, Lowell

Paul King, Newton
 Allan R. Kirkland, Lowell
 Hyman S. Koch, Dorchester
 Joseph A. Krichmar, Hyde Park
 Harold P. Leonard, Brockton
 Allan P. Lindblad, Everett
 John M. Mader, C.P.A. (Ill.), Chicago, Ill.
 Leonard S. Manchester, Natick
 Clifford M. Martin, Boston
 William H. Martin, Roslindale
 Lewis L. Martinson, Boston
 Fernand L. Mathieu, Roxbury
 William I. McCullough, Braintree
 Edward H. McDermott, South Boston
 Arthur D. Meister, Dorchester
 Carl C. Mullen, Newtonville
 Frederick M. Nadeau, Boston
 Carl S. Nelson, Arlington
 Charles W. O'Keefe, Winthrop
 Bernard D. O'Leary, Dorchester
 Samuel M. Paley, Dorchester
 Roland M. Reilly, East Braintree
 James H. Richardson, Hyde Park
 John W. Robbins, C.P.A. (Mass.), Somerville
 Samuel Rosenthal, Chelsea
 Charles A. Rudd, Dorchester
 George J. Schools, Wollaston
 Reuben Schwartz, Boston
 Benjamin Selsberg, Lynn
 Theodore Shaps, Boston
 Edward Siegel, Somerville
 John F. Sullivan, Dorchester
 Leon V. Talabac, Boston
 Henry E. Tracy, Lynn

*Deceased.

William C. Vietze, Hyde Park
 Allan M. Walker, Taunton
 Joseph M. Walters, Lynn
 Frederic B. Watson, South Braintree

Arthur K. Wilson, Chelmsford Center
 Guy C. Witham, Gloucester
 Frank J. Wolf, Somerville
 Sydney Wood, East Braintree

WORCESTER DIVISION

Frederick E. Barrett, Worcester
 Raymond Bliss, Worcester
 Henry Cotton, Worcester
 Charles W. Drugan, Worcester
 Sydney B. Feingold, C.P.A. (Mass.), Worcester
 William J. Foley, Worcester
 Charles A. Forss, Worcester
 William I. Goldberg, Worcester
 Edna V. Herrick, Worcester
 Edward A. Lanigan, Worcester

Henry A. LaRiviere, Worcester
 Francis Leary, Northboro
 Frederick Leary, Northboro
 John F. Looney, Worcester
 William F. Lucey, Worcester
 James T. O'Malley, Worcester
 Fred R. Profit, Worcester
 William C. Quinn, Worcester
 Frederick W. Stoughton, Worcester
 John Wiseman, Worcester

SPRINGFIELD DIVISION

Cecil R. Barber, Westfield
 Ralph G. Bartlett, Springfield
 George J. Bernard, Holyoke
 David E. Davis, Woronoco
 William H. Hanson, Springfield
 William S. Hendry, Springfield
 Marsden W. Longden, Indian Orchard

Robert W. Morrissey, Springfield
 Hazen R. Ober, Springfield
 George W. Rice, Jr., Springfield
 Stanley O. Smith, Springfield
 Carl H. Swenson, Springfield
 Frank P. White, Springfield

BRIDGEPORT DIVISION

Albert E. Godfrey, Bridgeport

Max Schwartz, Bridgeport

1923 — BACHELOR OF COMMERCIAL SCIENCE

BOSTON

Alfred D. Alessandro
 Samuel Alexander, Roxbury
 S. Arnold Altschuler, Boston
 Leon F. Anderson, Dorchester
 John McCole Barron, Boston
 Joseph Bear, Everett
 Arthur R. Bell, Roxbury
 Charles W. Betcher, Winter Hill
 Bernard Blank, Roxbury
 Linus T. Bresnahan, Lynn
 Robert M. Brickman, Dorchester
 Frederick L. Brown, Lynn
 Thomas P. Brown, Boston
 August L. Burda, Jamaica Plain
 James P. Butler
 William Cairns, Revere
 Robert H. Card, South Boston
 James S. Cheverie, Salem
 Harry O. Clark, Medford Hillside
 Elmer H. Comey, Cambridge
 Max Cooper, Chelsea
 Joseph D. Cox, East Boston
 Frank V. Crockford, Everett
 Louis K. Cutler, Jr., Beverly
 James W. Dempsey, Natick
 John W. Downey, Ashmont

Carol S. Elliott, Cambridge
 William A. Everett, Everett
 Paul F. Farrington, Lowell
 Edward W. Fudge, West Somerville
 Charles H. Gillis, Malden
 Gordon P. Gillis
 Jacob Gold, Dorchester
 Aaron B. Goldstein, Roxbury
 George H. Harding, Brookline
 William M. Healey
 Harold B. Higgins, Dorchester
 George S. Hodgson, Dorchester
 Ralph B. Huberman
 Lyman M. Hutchins, Jamaica Plain
 Herbert E. Jacques, West Somerville
 Charles H. Johnson, Cambridge
 Phillip Kane, St. Louis, Mo.
 Sidney M. Kensinger, Melrose
 Frank E. Lakey, West Stoughton
 Irving Landfield, Dorchester
 Joseph I. Levin, Dorchester
 Ernest H. Lindsay, Boston
 Earl D. Long
 Charles E. Lynch, Dorchester
 Albert M. Maden, Readville
 Hugh E. Marshall, C.P.A. (Mass.), Boston

*Deceased.

Ralph W. Marshall, Hyde Park
 Herbert F. Mills, Jamaica Plain
 Harold A. Mock, Jamaica Plain
 Willis B. Oram, Everett
 Charles T. Read, Clinton
 Israel N. Reamer, Boston
 Maurice Rottenberg, Dorchester
 Phillips C. Salman, Needham
 Albert E. Saunders, Somerville
 Reuben Shaer, Dorchester
 Maurice N. Sherman, West Somerville

Alfred E. Shienfeld, Mattapan
 Louis C. Thomas, Allston
 James Thomson, Jr., Belmont
 Ambert E. Thresher, Dorchester
 Harold L. Troope, Boston
 Everett K. Wallace, Boston
 Thomas A. Wallace, Somerville
 Starling H. Waters, Boston
 Louis Winn, Mattapan
 Forrester S. Wyman, Waltham

WORCESTER DIVISION

Edward N. Blain, Whitinsville
 Francis J. Carrigan, Worcester
 Frank E. Gilmore, Worcester
 John F. Hagerty, Worcester
 Raymond B. Hatch
 John R. Johnson, Leominster
 George M. Morton, Worcester

Wesley S. Mowry, Worcester
 Arthur L. Nelson, Worcester
 Henry F. O'Connell, Worcester
 Clarence T. Rolander, Worcester
 Herbert C. Sheppard, Worcester
 Henry M. Silverman, Worcester
 Vincent J. Vieraitis, Worcester

SPRINGFIELD DIVISION

Abraham Bettigole, Springfield
 Euclid A. Blanchard, Chicopee Falls
 Leslie A. Carpenter, Springfield
 John W. Costigan, Springfield
 Roy F. Dutcher, Springfield
 Robert R. Emerson, Springfield
 Raymond F. Finnegan, Mittineague
 Harry M. Hiser, Springfield
 Philip D. Howe, Springfield

Robert L. Kennedy, Springfield
 Joseph A. Lopardo, Springfield
 Francis J. Mahoney, Holyoke
 George Maxwell, Mittineague
 Horace O. McCrea, Springfield
 Charles T. Powers, Springfield
 Agnes A. Ranson, Springfield
 Lester H. Van Ness, Springfield
 Francis C. Wheaton, Springfield

PROVIDENCE DIVISION

Albert B. Almy, Swansea
 Israel T. Almy, Swansea
 Raymond H. Andersen, Providence
 George B. Bengston, Providence
 Johan C. Carlson, Eden Park
 Carl W. Christiansen, Slatersville
 Ralph S. Connell, Providence
 Earl T. Cox, Providence
 Henry J. Hamel, Providence
 Verrano C. Hart, Cranston
 Harry C. Holt, Providence
 David Howard, Providence
 Leo Jacobson, Providence
 Harold G. Kenyon, Auburn
 Ernest W. Lane, Providence

William C. MacCracken, Providence
 Andrew W. Malsch, Auburn
 Joseph F. McSoley, Providence
 Walter G. Moon, Attleboro, Mass.
 Walter E. Moore, Pawtucket
 Albert D. Nelson, Providence
 Leo O. Poliquin, Pawtucket
 James A. Ratcliffe, Pawtucket
 David W. Revie, Providence
 John Richardson, Jr., Pawtucket
 Leland E. Taylor, Pawtucket
 Donald M. Walker, Providence
 Charles R. Walpole, Providence
 Franklin R. Westell, Providence

BRIDGEPORT DIVISION

John M. Berkowitz, Bridgeport
 Joseph H. Brondo, Stamford
 Elliot R. Casey, Bridgeport
 Francis E. Gartland, Bridgeport
 Charles J. Halpin, Bridgeport

LeRoy S. Hawkins, Bridgeport
 Frederick J. Leiss, Jr., Bridgeport
 William H. Shea, Bridgeport
 Ralph E. Sprague, Bridgeport

*Deceased.

1924 — BACHELOR OF COMMERCIAL SCIENCE

BOSTON

George Bennett, Revere
 Ralph W. Bernard, Boston
 Thomas W. Berridge, Jr., Winthrop
 William Blanchard, Malden
 Homer W. Bourgeois, Lowell
 Ashley D. Burt, Roxbury
 Harold F. Butler, Medford
 Albert S. Carmichael, Malden
 Rebecca I. Cohen, Everett
 Walter F. Connor, Lowell
 Earl L. Cragin, Somerville
 John S. Donoghue, Dorchester
 Pierce C. Donovan, East Boston
 William A. Eisenhower, Cambridge
 Frank P. Farnum, Lynn
 Carlton E. Fay, Waverley
 George J. Flynn, Jamaica Plain
 Samuel T. Foster, Cambridge
 James W. Foy, Roxbury
 Roy W. T. Francis, Saugus
 Jacob Garber, Lynn
 Lorimer E. Goodwin, Jamaica Plain
 Boleslaus A. Grzybowski, Boston
 David L. Haskell, Boston

Earl E. James, Newtonville
 Henry J. Jenner, Wollaston
 Theodore Kane, Roxbury
 Andrew J. Kelly, Jr., Dorchester
 John E. Kirwin, Newton
 Richard H. Lanigan, Jamaica Plain
 Phillip Lemelman, Boston
 Theodore N. MacKay, Waverley
 Warren H. Manning, West Somerville
 Paul H. Obear, Winthrop
 Edmund L. O'Brien, Taunton
 Orville S. Parker, Somerville
 Leo E. Paro, Winthrop
 William T. Peabody, Melrose
 Roy L. Phillips, East Lynn
 Percival O. Potter, Marblehead
 Edward G. Pyne, Beachmont
 Thomas J. Reagan, East Taunton
 Thomas W. Roose, Charlestown
 Clarence B. Skeels, Roslindale
 Albert W. Thompson, Norwood
 Frank Toomey, Prides Crossing
 Augustus York, Cambridge

WORCESTER DIVISION

Albert T. Carpenter, Worcester
 Wesley H. Durant, Worcester
 Frank L. Hiller, Worcester
 John E. Holley, Worcester
 Edwin I. Hutchins, Northboro
 G. Elmer Johnson, Worcester

Earl C. Jones, Worcester
 Constantine Kontulis, Worcester
 Richard E. Leonard, Worcester
 Donald G. Posson, Worcester
 George F. Putnam, Worcester
 Alfred V. Stuart, Worcester

SPRINGFIELD DIVISION

Irving C. Barnes, Westfield
 Caroline E. Bergmann, Westfield
 Philip C. Blanchard, Holyoke
 Ernest H. Chapman, Springfield

Harold A. Dumais, Indian Orchard
 Edward P. Grace, Springfield
 Godfrey D. Porter, West Springfield

PROVIDENCE DIVISION

Wesley G. Carlson, Eden Park
 Edward C. Drinkwater, Auburn
 William C. Ellis, Providence
 Earl H. Goodby, Providence
 Ralph W. Jordan, Providence
 Samuel L. Kasper, Providence
 William W. Kinniburgh, Pawtucket
 Earl F. Lapham, Dryden Heights

Raymond F. Murphy, Woonsocket
 John M. Parker, Fall River
 Albin E. Pilblad, Pawtucket
 Frederic W. Ripley, East Providence
 George L. Stringer, Auburn
 John W. Wadsworth, Fall River
 Norman P. Walmsley, Providence
 William J. Weir, Pawtucket

NEW HAVEN

William C. Armstrong, Jr., New Haven
 Floyd J. Blakeman, East Haven
 Charles L. Braun, New Haven
 Alfred L. Bristol, New Haven
 Anthony Cacace, New Haven

Bella Cohen, New Haven
 LeClaire N. Filiatreault
 Frederick F. Fischer, New Haven
 Charles R. Vertefeuille, New Haven

BRIDGEPORT

Rudolph W. Billing, Bridgeport
 Wilfrid J. Bissonnette, Bridgeport
 Monroe M. Frankel, Bridgeport

John Lownds, Bridgeport
 Fred C. Shea, Bridgeport
 H. Ivison Turp, Bridgeport

* Deceased.

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NORTHEASTERN UNIVERSITY

EVENING POLYTECHNIC SCHOOL

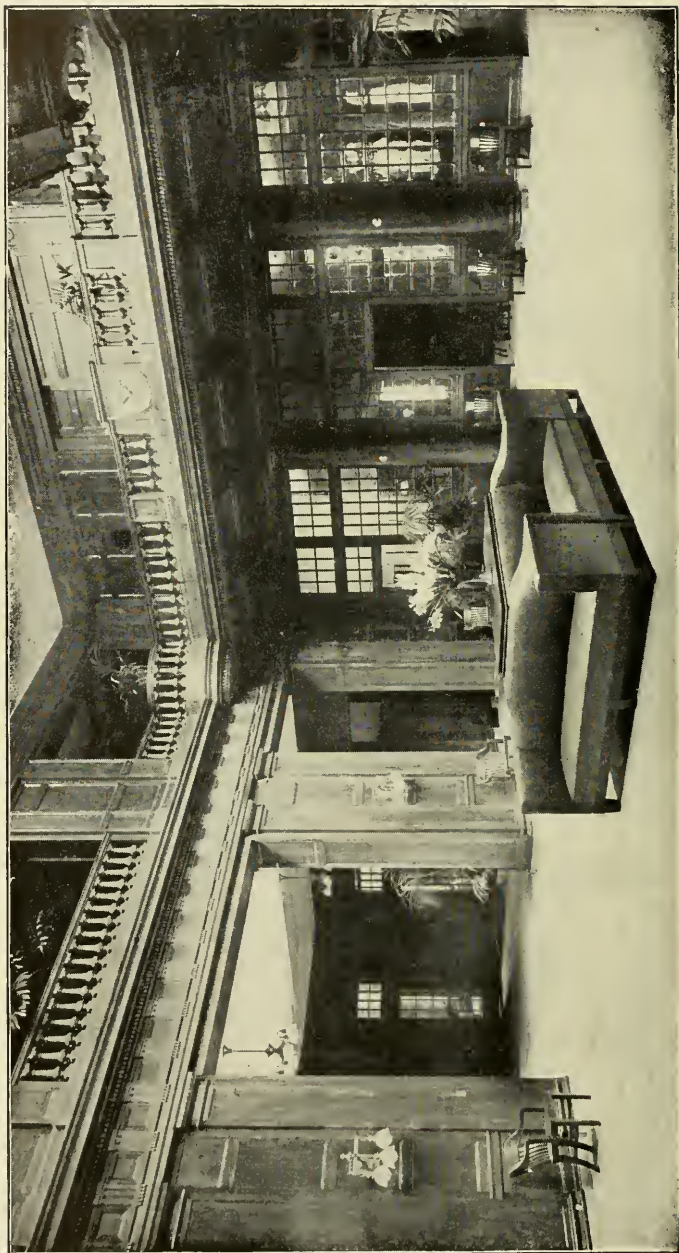


BOSTON YOUNG MEN'S CHRISTIAN
ASSOCIATION

BOSTON 17, MASSACHUSETTS

Northeastern University
EVENING POLYTECHNIC
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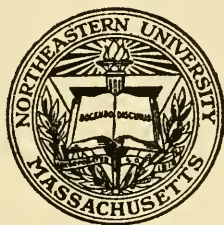
Boston 17, Massachusetts



THE LOBBY, ASSOCIATION BUILDING

NORTHEASTERN UNIVERSITY

Evening Polytechnic
School



Published by the
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Boston Young Men's Christian Association
316 Huntington Avenue, Boston, Massachusetts

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JOHN BUTLER PUGSLEY, A.B. <i>Assistant Professor of Mathematics</i>	23 Hardy Ave., Watertown
HENRY EDWARD RICHARDS, S.B. <i>Assistant Professor of Electrical Engineering</i>	31 First St., Melrose

NORTHEASTERN UNIVERSITY

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<i>Assistant Professor of Chemistry</i>	
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<i>Assistant Professor of Drawing</i>	
HOLLEY STETSON WINKFIELD, S.B.	35 Dartmouth St., Arlington
<i>Assistant Professor of Electrical Engineering</i>	

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<i>Instructor in Mathematics</i>	
HENRY GUSTAVE ANDERSON, B.M.E.	30 Garnet Rd., West Roxbury
<i>Instructor in Mechanical Engineering</i>	
CHARLES OSCAR BAIRD, JR.	32 Beacon Hill Ave., Lynn
<i>Instructor in Civil Engineering</i>	
CHESTER PACKARD BAKER, B.Ch.E.	53 Wendell Ave., Brockton
<i>Instructor in Chemical Engineering</i>	
RUFUS HALLOWELL BOND, A.B., LL.B.	106 Lawrence St., Medford
<i>Instructor in Mathematics</i>	
ELMER TOIVO CARLSON, B.E.E.	Sandwich, Mass.
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<i>Instructor in Drawing</i>	
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<i>Instructor in Civil Engineering</i>	
FORREST MELDON HATCH, S.B.	38 Ferry St., Malden
<i>Instructor in Physics</i>	
ERVIN H. LEWIS, B.E.E.	43 Gay St., Newtonville
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ARTHUR BIRD MONTGOMERY, B.B.A.	1000 Hyde Park Ave., Hyde Park
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GEORGE WESLEY TOWLE, S.B.	244 Middlesex Ave., Medford
<i>Instructor in Mechanical Engineering</i>	
ALBERT EDWARD WHITTAKER, B.M.E.	15 Laurel St., Lynn
<i>Instructor in Physics</i>	

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LEWIS EMERY COBB	148 Mystic St., West Medford
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<i>Assistant in Electrical Engineering</i>	
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<i>Assistant in Physics</i>	

EVENING POLYTECHNIC SCHOOL

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WARREN SANFORD KUMBLAD <i>Assistant in Chemical Engineering</i>	66 French Ave., Brockton
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LESTER JOSEPH PARSONS <i>Assistant in Physics</i>	2 Wigglesworth St., Roxbury
WADE HAMPTON SHORTER, JR. <i>Assistant in Physics</i>	48 Cherry St., Quincy
CHARLES WILLIAM SKINNER <i>Assistant in Chemical Engineering</i>	Main St., Hamilton
ADELBERT IRVING SLOCUM <i>Assistant in Electrical Engineering</i>	1133 Hyde Park Ave., Hyde Park
CLARENCE WINSLOW TAYLOR <i>Assistant in Chemical Engineering</i>	24 Everett Sq., Allston
KARL HARRY WILBER <i>Assistant in Physics</i>	South Amboy, N. J.

NORTHEASTERN UNIVERSITY

GENERAL INFORMATION

History of Northeastern University

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896 that the actual foundations for the University were laid. The larger number of courses offered required a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering was opened in 1909 and given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, Bachelor of Chemical Engineering and Bachelor of Administrative Engineering. The School of Business Administration was opened in September, 1922, with the right to grant the degree of Bachelor of Business Administration. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, the Department of University Extension, and the Vocational Institute are conducted under the administration of the University. In March 1923, the University was granted general degree granting power by the Massachusetts Legislature.

The Evening Polytechnic School was founded in 1913. Although many evening technical courses had been offered

EVENING POLYTECHNIC SCHOOL

before, the regular standard curriculums in Engineering consisting of three continuous years of study had not been established. The School now offers five curriculums in Engineering in addition to special courses. The School is well equipped to carry on the Engineering work; has a faculty consisting of experienced and able engineers and educators; and an enrollment of over three hundred students.

Object of the School

Students are given a thorough training in the fundamental sciences of mathematics, chemistry, physics, and in the important applications of the principles of these sciences to the several branches of engineering. Much stress is laid on the development of the ability to apply the acquired knowledge to new engineering problems, and an effort is made to be thorough without leading the student through a maze of mere mental gymnastics.

The program of studies differs from that of many schools, in that a student is not permitted a wide range of subjects from which to choose. It has been found that better results are obtained by prescribing the principal studies which the student is to pursue.

Many men in various lines of industry feel the need of special instruction in Engineering, either to advance in their chosen occupation, or to enable them to change their positions and get into work of an Engineering nature.

To such men the School offers a wide variety of regular Engineering curriculums, and in addition, special instruction for those who desire it. The Engineering curriculums require attendance three evenings a week, during a period of three years. Only fundamental subjects which meet standard requirements are pursued.

Three-Year Engineering Curriculums

Regular three-year curriculums, leading to a diploma, are offered in the following branches of Engineering:

NORTHEASTERN UNIVERSITY

- I Civil Engineering
- II Mechanical Engineering
- III Electrical Engineering
- IV Chemistry
- V Structural Engineering

Special Courses

Special courses, which may be found described in detail in the latter part of this catalog, are offered by the School.

Requirements for Admission

The work carried on in the regular curriculums assumes that the entering student has had previous training in Elementary Algebra to quadratics, Plane Geometry, and has a good ground-work in English. An entering student should have completed at least the equivalent of one or two years' work in a standard high school. Those who have completed a full high-school course should be well fitted to carry on the courses and derive the maximum benefit from the work.

Men who have finished grammar school, but who have not had the requisite previous training in Mathematics and English, may attend the Evening Courses of the Northeastern Preparatory School, and should be able to get in one year the necessary preparation for entrance to the Polytechnic School.

There are no entrance examinations, but each applicant for admission is required to have an interview with the School officials.

The qualifications of each applicant will be ascertained and he will be advised as to the work he is qualified to undertake.

Should a student prove to be unable to carry on his studies successfully, he may be required to discontinue any subject in which he is deficient, and complete such preparatory work as is deemed necessary before being re-admitted to the subject in question.

EVENING POLYTECHNIC SCHOOL

Condition Examinations

Special condition examinations in any subject which students have taken and failed will be given by the School during the second week of April. All students who desire to take condition examinations are requested to file a petition at the school office on or before April 1, in order that arrangements for the examinations may be made. Each student taking a special condition examination is required to have made a payment of \$2 for the examination and to present his receipt as a card of admission to the examination.

Tuition Fees

For each year of the regular three-year curriculums, the tuition fee is sixty dollars. The tuition fee includes membership in the Association, and is payable as follows:

One-half upon entering the School

One-fourth on Monday of the tenth school week

One-fourth on Wednesday of the eighteenth school week

The tuition fee for special courses will be found on page 54.

Refunds

The College assumes the obligation of carrying the student throughout the year. Instruction and accommodations are provided on a yearly basis, therefore, no refunds are granted except in cases where students are compelled to withdraw on account of personal illness. The application must be accompanied by a satisfactory certificate from a physician.

Laboratory Fees

All students taking courses in the Chemical and Electrical Laboratories are charged laboratory fees in accordance with the following rates: Inorganic Chemistry Laboratory (26), \$10; Analytical Chemistry Laboratory (28), \$10; Organic Chemistry Laboratory (30), \$15; Direct Currents Laboratory

NORTHEASTERN UNIVERSITY

(22), \$5; Alternating Currents Laboratory (24), \$5. These fees are payable on entrance and do not cover breakage or destruction of apparatus. They are non-returnable.

An additional chemical laboratory deposit of \$10 must be made when a desk is assigned to a student. At the close of the school year the cost of equipment, broken by the student or not returnable, will be deducted from this amount and the balance refunded. Students failing to check up their desks upon leaving school will be charged \$1 extra.

Books and Supplies

All supplies may be purchased from the University Book Store at cost of five (5) to twenty (20) dollars per year. Supplies for the freshman year aggregate somewhat more because a set of drawing instruments must be obtained.

Membership in the Y. M. C. A.

The yearly tuition fee for regular students includes membership in the Boston Y. M. C. A. This fee is not included in the tuition for special students.

The Boston Y. M. C. A.

Northeastern University is conducted by the Boston Y. M. C. A., though non-sectarian, it is thoroughly Christian in character. Students are encouraged to participate in the activities of the Student Christian Association of the University, so far as is consistent with their own particular religious beliefs. However, a student should not hesitate entering the School because of religious faith, no attempt being made to influence one to participate in activities which are contrary to the tenets of his particular religion.

Religious Activities

Students are cordially welcomed and urged to participate in all the activities of the Y. M. C. A.—it is hoped that they will

EVENING POLYTECHNIC SCHOOL

feel free to do so to the largest extent possible. In connection with the various departments of each Association, an ample social and religious program is provided, so that all men should be able to find that type of activity in which they are most interested. Full information may be received on inquiry.

Transfers

No student is permitted to transfer from one course to another without consulting the school officials beforehand and receiving a transfer order.

Absences

No "cuts" are allowed. A careful record of attendance upon class exercises is kept for each student. Absence from regularly scheduled exercises in any subject will seriously affect the standing of the student. It may cause the removal of the subjects from which he is absent from his schedule and the listing of these subjects as conditioned subjects. In case he presents a reasonable excuse for the absence, however, he may be allowed to make up the time lost and be given credit for the work; but he must complete the work at such time and in such manner as his instructor in the course shall designate.

Reports of Standing

An informal report of the student's standing is issued at the end of the first term, and a formal report, covering the year's work, is issued at the close of each year.

Conduct

It is assumed that students come to the School for a serious purpose, and that they will cheerfully conform to such regulations as may from time to time be made. In case of injury to any building, or to any of the furniture, apparatus, or other property of the School, the damage will be charged to the

NORTHEASTERN UNIVERSITY

student, or students, known to be immediately concerned; but if the persons who caused the damage are unknown, the cost for repairs may be assessed equally upon all the students of the School.

Status of Students

The ability of students to continue their courses is determined by means of classroom work and examinations, but regularity of attendance and faithfulness to daily duties are considered equally essential.

When a student elects a curriculum, he is required to complete all courses included therein in order to be graduated. No subject is to be dropped, or omitted, without the approval of the Dean.

A special student is permitted to attend the School, subject to the approval of the Dean, and to take such courses as the School offers. Special students are not eligible for a diploma.

Rules of Standing in Scholarship

A student's grade is officially recorded by letters and percentages, as follows:

A, excellent, 90-100 per cent.

B, good, 80-89 per cent.

C, fair, 70-79 per cent.

D, passable, 60-69 per cent.

F, failure, work unsatisfactory, 40-59 per cent.

FF, complete failure, below 40 per cent.

I, incomplete.

A mark of F in any particular subject entitles the student to make up the unsatisfactory work, or to take a condition examination. This letter is given for all grades below 60 per cent on intermediate reports.

A mark of I is used for intermediate grades only and signifies that the course may not have progressed sufficiently far

EVENING POLYTECHNIC SCHOOL

to give a grade or that the student has not had time to make up work lost through excusable absences.

The responsibility for the removal of a condition rests with the student, who is required to ascertain when and how the condition can be removed.

No student may qualify as a candidate for a diploma in any given year unless clear in all the required subjects of the lower years of his chosen curriculum. He must also be in good standing in all courses for which he is enrolled.

Entrance requirements or preparatory subjects pursued in the School are considered as required School work.

Requirements for Graduation

To receive a diploma in engineering the student must be a resident of the School for at least one year, immediately preceding the date on which he expects to be graduated. He must have completed the three years of prescribed work of his chosen curriculum, and to have passed such final examinations as are required in the respective courses.

Students Admitted with Advance Standing

Students who, upon admission, were granted provisional advance standing, but have not presented evidence of their eligibility to such advance standing, shall not be granted the diploma of the School.

Residence

It has been found to be much more satisfactory for the student to live, if possible, within easy access of Boston. The saving of time and effort more than offsets any increased expense.

There are limited accommodations at very moderate rates in the dormitories. These rooms may be had separately or in groups with a common reception room. The price varies from \$3 per week upwards. Since board costs about \$8 to \$10 per

NORTHEASTERN UNIVERSITY

week, a student may obtain room and board for from \$12 per week upwards.

Residence in Boston, though not required, is advisable as it gives the student opportunity to use the college facilities outside of class hours, and to confer easily with his instructors about his scholastic work.

The School officials have no jurisdiction in the matter of dormitory assignments. Students should write the General Activities Department of the Boston Y. M. C. A. for rooms in the dormitories.

The General Activities Department of the Y. M. C. A. maintains a registry of suitable rooms in the nearby houses for the convenience of students desiring accommodations outside of the dormitories.

School Year

The first semester begins each year in September and continues for fourteen weeks. The second semester of fourteen weeks follows immediately upon its close and ends in April.

Location

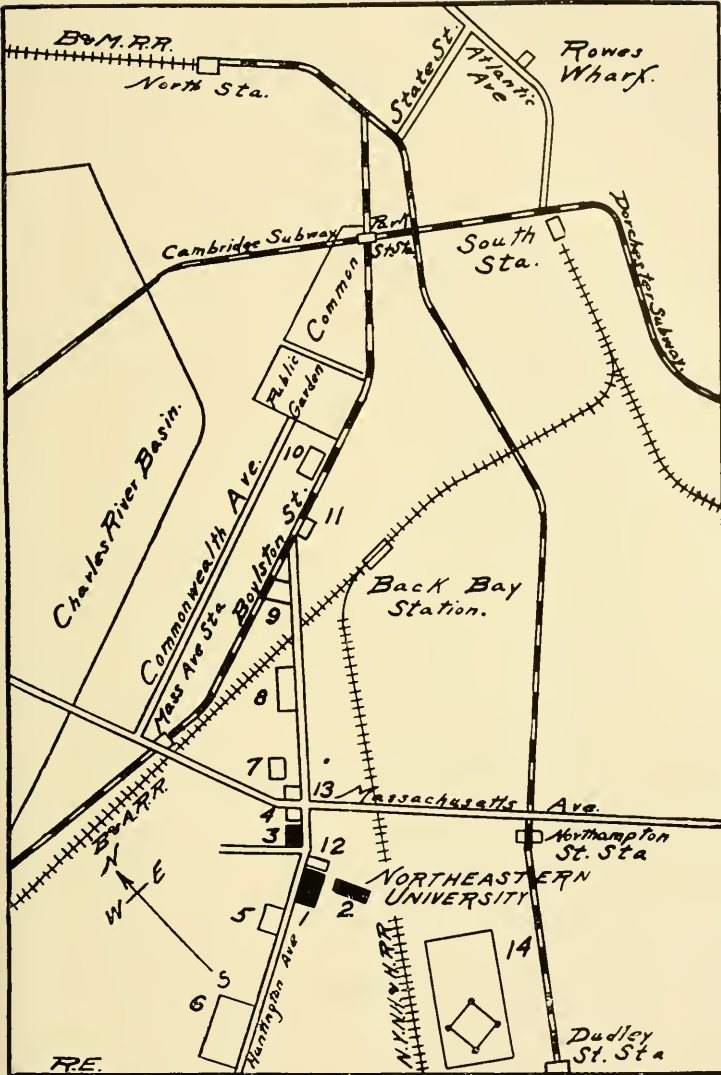
The School is housed in the three buildings of the Association, the Vocational Building on St. Botolph Street, in the rear of the Main Buildings, and the Huntington Building opposite the Main Buildings.

The buildings are located on Huntington Avenue, just beyond Massachusetts Avenue, and are within easy access to the various railroad stations, and the business and residential sections. A map is shown opposite page 16.

Elective Subjects

Students electing any course not included in their curriculum will be required to take all examinations in that course and to attain a passing grade in it before they will be eligible for a diploma.

NORTHEASTERN UNIVERSITY



MAP OF IMMEDIATE VICINITY
(For key see next page)

EVENING POLYTECHNIC SCHOOL

1. ADMINISTRATION BUILDING
(Boston Y. M. C. A.)
2. VOCATIONAL BUILDING
3. HUNTINGTON BUILDING
4. SYMPHONY HALL
5. BOSTON OPERA HOUSE
6. BOSTON MUSEUM OF FINE ARTS
7. CHRISTIAN SCIENCE CHURCH
8. MECHANICS EXHIBITION HALL
9. BOSTON PUBLIC LIBRARY
10. MUSEUM OF NATURAL HISTORY
11. TRINITY CHURCH
12. NEW ENGLAND CONSERVATORY OF MUSIC
13. HORTICULTURAL HALL
14. NORTHEASTERN ATHLETIC FIELD

EVENING POLYTECHNIC SCHOOL

Relation of School to Preparatory Schools

This School is well adapted to the needs of a student with limited financial resources who has the ambition and ability to get ahead.

This year the School has a student body made up of students from the following schools:

Abington High School	Howe High School
American High School (Marash, Turkey)	Huntington School
Amesbury High School	Hyde Park High School
Ansonia High School (Conn.)	Irrington High School
Arlington High School	Island Falls High School (Me.)
Belmont High School	Kimball Union Academy
Berkeley Preparatory School	Lawrence High School
Beverly High School	Liberty High School (N. Y.)
Beverly Industrial School	Lowell High School
Boston College High School	Lynn Classical High School
Boston English High School	Lynn English High School
Boston High School of Commerce	Lynn Evening High School
Boston Trade School	Malden High School
Brighton High School	Manchester High School (N. H.)
Brockton High School	Marblehead High School
Brookline High School	Marlboro High School
Cambridge Latin High School	Mechanic Arts High School
Charlestown High School	Medford High School
Chatham High School	Medway High School
Chelmsford High School	Melrose High School
Chelsea High School	Milford High School
Dalton High School	Milton High School
Danvers High School	Moorehouse College (Atlanta, Georgia)
Dean Academy	Mt. Allison Academy
Dedham High School	Natick High School
Dorchester High School	New Bedford High School
East Boston High School	Newton High School
Elgin High School (Ill.)	Newton Technical High School
Eron Preparatory School	Newton Vocational High School
Everett High School	Northeastern Preparatory School
Exeter High School	Norwood High School
Fayetteville High School (N. C.)	Peabody High School
Fall River Technical High School	Plymouth High School
Fitchburg High School	Plymouth High School (N. H.)
Foxboro High School	Portland High School (Me.)
Franklin Union	Quincy High School
Frazee High School (Minn.)	Quincy Industrial School
Gloucester High School	Rawden High School (N. S., Can.)
Gordon's College, Scotland	Revere High School
Haverhill High School	Richford High School
Hartford Public High School	Rindge Technical High School
Hingham High School	Salem High School
Homestead High School (Pittsburgh)	Saugus High School
	Sharon High School

NORTHEASTERN UNIVERSITY

Shediac High School (N. B., Can.)	Vocational High School (New London, Conn.)
Somersworth High School (N. H.)	Wakefield High School
Somerville High School	Waltham High School
Somerville Evening High School	Watertown High School
South Boston High School	Wellesley High School
Springfield Technical High School	West Roxbury High School
St. Mary's High School	Weymouth High School
Stoneham High School	Wilmington High School
Summerside High School	Winchester High School
Taunton High School	Winthrop High School
Templeton High School	Woburn High School
Thayer Academy	Woodstock High School
Troy High School (N. Y.)	Wrentham High School
Valdesta Academy (Louisiana)	

Positions Held by Graduates

The graduates of the School are in constant demand, and it may be said that those who complete one of the courses successfully can be sure of desirable employment in their chosen lines.

Naturally the School does not guarantee to place its graduates in positions. This is not necessary since our graduates have no difficulty in finding places for themselves.

Special Students

A special student may take any subject, upon the approval of the Dean, provided he has had the necessary preliminary training.

Diplomas

Upon the satisfactory completion of any of the regular curriculums, the student is entitled to receive a diploma. A fee of five dollars is required of all candidates for a diploma. This fee must be paid on or before May 1.

EVENING POLYTECHNIC SCHOOL

EQUIPMENT

Field Instruments of Civil Engineering

For work in the field, the Civil Engineering Department possesses various surveying instruments, representing the principal makes and types in general use.

The equipment includes four surveyor's compasses, two Keuffel & Esser transits, five Buff & Buff transits, one Buff & Buff triangulation transit, two Hutchinson transits, one Poole transit, two Berger levels, two Keuffel & Esser levels, one Bausch & Lomb precise level, two Gurley plane tables, two Buff & Buff plane tables, and two Keuffel & Esser plane tables.

There are Locke hand levels, flag poles, leveling rods, stadia rods, engineers' and surveyors' chains, steel and metallic tapes, and all the miscellaneous equipment necessary to outfit the parties that the instruments will accommodate. The transits are equipped with neutral glasses and reflectors for astronomical observations. For higher surveying there is an aneroid barometer for barometric leveling, an Invar tape, a sextant for hydrographic surveying, and a Gurley electric current meter for hydraulic measurements.

The extent of the equipment and scope of the field work itself are designed to train the student's judgment as to the relative merits of the various types of field instruments.

Testing Materials Laboratory

This laboratory is equipped with a 50,000 pound Olsen Testing Machine, by means of which experiments in tension, compression, shear and cross bending can be conducted.

For testing the gradations of concrete aggregate and the fineness of cement a Ro-Tap Sieve Shaker, with a special timing device has been installed.

These machines together with accessory tools and appliances provide complete means of testing the strength of steel, iron, wood and concrete specimens, subjected to all kinds of stress that are met with in construction, or manufacture.

NORTHEASTERN UNIVERSITY

Mechanical Laboratories

The Mechanical Engineering Department has a well-equipped laboratory, containing new and up-to-date machines run by steam, gas, and electricity. A fifty horsepower uniflow engine of the latest design is available for making a complete engine test. This engine is equipped with a Prony brake for measuring the output. A surface condenser is connected into the line with the engine. A Chicago steam-driven air compressor is completely equipped for making tests on both the steam and air ends of the machine and this is also tied in with the surface condenser. A Sturtevant air blower, motor-driven, is arranged to run a complete test on. Other steam-driven apparatus includes a steam pulsometer, and steam injector.

Under the hydraulic equipment in the Laboratory may be listed a triple power pump, motor-driven, a hydraulic motor of the Pelton Wheel type, a triangular weir for measuring flow of water, besides the necessary tanks and weighing scales.

In addition to the steam-driven apparatus and machines for hydraulic purposes, there is a Gas Laboratory consisting of a Fairbanks-Morse 10-horsepower oil and gas engine, so set up that tests may be run using various kinds of fuels and complete test data obtained; a Ford automobile engine arranged to run tests with different fuels and carburetors, and a gasoline airplane engine for demonstration purposes.

The steam-power plant is also available for testing purposes. The plant is equipped with a flow meter in the feed water line, steam-pressure gauges, scales, electrical meters, thermometers, indicators, Orsat apparatus, CO₂ recorder and other equipment necessary for complete power-plant tests. The plant consists of four horizontal return tubular boilers two of which are equipped for burning fuel oil and two for burning coal; various auxiliary appliances as feed water pumps, feed water heater, oil fuel pumps, and separators; and four three-wire generators, three of which are driven by Ridgeway reciprocating steam engines, and the fourth is directly connected to a Westinghouse Parsons turbine.

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This places at the disposal of the students well-equipped, up-to-date engineering laboratories and enables them to carry on boiler tests, with both coal and oil as fuel, determine the efficiencies of various fuels, determine the efficiency of modern reciprocating steam engines of different types, and test air compressors, fans, pumps, water wheels and gas engines. This renders the student familiar with the various auxiliary appliances of a modern power plant. Apparatus is also available for slide valve setting, gauge testing, measuring flow of air, steam, and water, prony brake testing and determining the quality of steam by means of a throttling calorimeter.

Electrical Measurements Laboratory

This laboratory is equipped with apparatus of two distinct types, first that planned fundamentally for teaching the principles of measurement and, second, that which is used in teaching advanced standardizing methods as well as for keeping the instruments in daily use in the other laboratories, as well as in the power house, correct or properly calibrated.

It is supplied with two sets of small storage cells for 500-volt calibration work and a set of 500-ampere-hour cells for current work.

The apparatus used in the first portion of the work includes the customary devices used in such work as resistance measurements by Ohm's law, direct deflation and substitution methods, voltmeter methods for high resistance, insulation resistance, specific resistance, use of slide wire and Wheatstone bridges, electrostatic capacity, Poggendorf's method of E. M. F. comparison, loop tests for grounds, etc.

For the second type of work there is a Laboratory standard Wheatstone bridge, two Kelvin bridges one of the self-contained type, a Leeds Northrup make Carey-Foster bridge and equipment, two potentiometers with auxiliary apparatus of volt boxes, standard cells, standard shunts of 10, 100, and 500 amperes capacity, a set of resistance standards of Bureau of Standards and also of Reichsanstalt patterns; Weston standard

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current transformer, Weston Laboratory standard triple range voltmeter, ammeter and wattmeter for alternating current work and all necessary galvanometers carried on Julius suspensions.

There have been added, first a complete Reichsanstalt daylight type photometer equipment, and second a Westinghouse portable oscillograph with full equipment; so that the Laboratory is now ready for practically any work in electrical measurements outside the absolute determination as carried on in the National standardizing laboratories.

The instrument room is supplied with 54 high grade General Electric Co. and Weston Electric Instrument Co. alternating current voltmeters and ammeters with a number of potential and current transformers, and with 6 polyphase and 10 single-phase indicating wattmeters each of double current and double voltage ranges.

For direct current working there are 48 voltmeters (of triple range), ammeters, and millivoltmeters of the above makes. There are 30 standard shunts of ranges from 10 to 100 amperes with uniform drops of 50 millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, loading resistances, frequency indicators, power factor indicators, etc.

Electrical Engineering Laboratory

This Laboratory also was entirely remodeled during the summer of 1922. Its floor area was increased by sixty per cent, and the apparatus rearranged as well as augmented along various lines.

It is equipped with 40 generators and motors of different types, the size and voltage ratings being selected to reduce as much as possible the risk from high voltage apparatus while making available to the student commercial apparatus such that the various quantities it is desired to measure will be of reasonable dimensions.

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Machines from 5 to 25 kilowatt capacity are used principally for this reason, but also because the student in his engineering practice early comes in contact with large and varied machinery in power houses and electrical plants generally.

For D. C. working, among others there are two sets of specially matched direct current 6-kilowatt, 125-volt compound generators, which will still work as shunt machines. One set is driven by a large Sprague motor with double extended shaft, the two generators being tied together by a coupling so that they may be used for "pump-back" testing. The other pair are driven individually by 10-kilowatt, 230-volt motors and used principally for parallel operation and similar work. A large 230-volt, 12-kilowatt., 200-R.P.M. Sturtevant motor is used for retardation tests, and an assortment of series, shunt and compound motors each fitted with brake wheels are used for routine motor testing.

For A. C. working there is a 15-kilowatt (80 per cent p. f.) 3-phase 230-volt alternator driven at 60 cycles by a 25-H.P. Westinghouse motor, a 7.5-kilowatt special G. E. machine with special armature taps so that it may be used as single phase, two phase, three or six-phase synchronous motor.

Two 12-kilowatt (80 per cent p.f.) G. E. machines having each armature coil tapped out separately also giving the above phase arrangements, each driven by its own motor and available for use either as synchronous generators or as motors. A 5-kilowatt Holtzer Cabot machine with three rotors, making it available as either a squirrel cage, wound rotor, or synchronous machine. A G. E. single phase clutch motor, a type R. I. induction motor, a Wagner single phase motor; two Wagner motors arranged for concatenation control, two 5-kilowatt Holtzer three-phase synchronous converters, and a Westinghouse 7.5-kilowatt two-phase motor.

For transformers there are six single-phase G. E. type H units wound for 550 volts primary and 220/110 volts secondary. Two sets of transformers with Scott transformation taps, a Type R. O. constant current transformer primary winding for 220/190 volts and secondary for 6.6 amperes, 310 volts

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maximum fitted with a load of 80 candlepower 6.6 amperes 60-watt nitrogen filled tungsten lamps, and a pair of 550/220, 110 volts G. E. three-phase transformers of 7.5-kilowatt capacity.

There is also a full equipment of necessary control and regulating appliances and 18 movable test tables fitted with the necessary terminals, switches, circuit breakers, etc., for setting up the various test combinations required from time to time. Each student when performing an experiment does the complete wiring, no apparatus in the Laboratory being found permanently wired up except as to its normal, self-contained circuits.

The Laboratory equipment is steadily being added to throughout the school year as the occasion arises so that a complete up-to-date list can not be given, also because as apparatus becomes obsolete it is discarded and replaced by the most recent type.

Power is supplied over a special set of feeders, by one or both of two special units in the power house which when on Laboratory service are cut clear from any other service whatsoever and potential is controlled from the laboratory.

For the second class of tests there are a laboratory standard Wheatstone bridge, Kelvin bridge, fittings for using the Carey-Foster method, two Leeds Northrup potentiometers (a high and low resistance one) with auxiliary apparatus as volt boxes, certified standard cells, standard shunts, standard current transformers, Weston Laboratory standard A. C. voltmeter of triple range, ammeter (also of triple range), wattmeter, and all necessary reflecting galvanometers carried on Julius suspensions.

The instrument room is supplied with 48 high grade General Electric Co. and Weston Electric Instrument Co. alternating current voltmeters and ammeters with a number of potential and current transformers, and with 5 polyphase and 9 single-phase indicating wattmeters each of double current and double voltage ranges.

For direct current working there are 41 voltmeters (of

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triple range), ammeters and millivoltmeters of the above makes. There are 24 standard shunts of ranges from 10 to 100 amperes with uniform drops of 50 millivolts to go with the millivoltmeters.

There is also a large and varied assortment of auxiliary equipment such as sliding rheostats for circuit control, loading resistances, frequency indicators, power factor indicators, etc.

Chemical Laboratories

The laboratories are arranged in three units, one for each of the general branches of chemistry; *i. e.*, inorganic, analytical and organic. To meet the requirements of the inorganic work, the equipment has been very carefully selected. The laboratory for analytical work is well supplied with the usual apparatus, and also apparatus for special work. Connected with this laboratory is a modernly equipped balance room.

This special equipment includes a Freas electric drying oven, a Kimley electro-analysis apparatus, an Emerson bomb calorimeter, an Arsat apparatus for gas analysis, a Saybolt viscosimeter, New York State flash point tester, a Babcock milk tester, a Hoskins electric combustion furnace and a Shriver type filter press.

The laboratory for organic work is especially equipped with steam lines for distillation purposes, besides the usual steam baths, drying closets, compressed air lines and hoods. The common chemicals, including acids, bases and salts, are available in the laboratories for general use at all times. At the end of one of the laboratories, conveniently located, is a fully equipped stock room, from which any other chemical or apparatus can be readily obtained.

Design and Drafting Rooms

The School possesses large, light, and well-equipped drawing rooms for the carrying on of the designing and drafting which form so important a part of engineering work. These rooms

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are supplied with lockers containing the drawing supplies, and files containing blue prints, and photographs of machines and structures that represent the best practice.

Physics Laboratories

The Physics Department has two large laboratories completely equipped with all necessary apparatus for the experimental work that is required of the students, as well as that required for lecture demonstration. The apparatus and equipment includes verniers, levels, vacuum pump, spirometer, planimeters, spherometers, calorimeters, thermometers, pyrometer, sonometer, spectroscope, spectrometer, balances, standard gram weight, lecture table galvanometer, optical disk with all accessories, lenses, photometer, air thermometer, and a full set of weather bureau apparatus, including barograph, thermograph, hygrometer, barometer, maximum and minimum thermometers, etc. These give a wide range to the experimental work that can be done.

Libraries

Students of the School have available for their use the University Library, which includes a large collection of engineering texts, reference books, and current periodicals on engineering and scientific subjects, and also the general library of the Association.

All members of the School have the privilege of taking books from the Boston Public Library, which offers a very unusual opportunity to our non-resident students. The School is within easy access of the Public Library, which enables students to have unlimited reference to engineering subjects at any time.

Still other libraries, such as the State Library, the library of the Massachusetts Historical Society, and the library of the American Academy of Arts and Sciences furnish re-enforcement in particular fields.

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Equipment for Physical Training

Northeastern has exceptional facilities for all-round physical training. The gymnasium with its 12-lap running track, three basketball courts, wrestling, boxing, fencing and special exercise rooms, handball courts and bowling alleys, is one of the most complete in New England. The natatorium is one of the best in the country. It is in a separate building, having a glass roof, admitting abundant sunlight, and has a continuous supply of filtered salt water. The tank is 75 feet long and 25 feet wide. Adjoining the building is a large field equipped for athletics. Here are four tennis courts, outdoor gymnasium, basketball court, jumping pits and a track with a 100-yard straight-away; baseball and football fields.

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CURRICULUMS OF STUDY

General Statement

Schedules of the various curriculums are given on the following pages. The work of the first year is practically the same for all curriculums. A few exceptions are necessarily made to meet the student's need of elementary training in his professional subjects.

The school year consists of twenty-eight weeks of class work and examinations. The twenty-eight weeks are divided into two semesters of fourteen weeks each. The subjects in the curriculum outlines on the following pages have been arranged by terms. Opposite each subject will be found the number of sixty minute periods devoted to class, recitation, laboratory, or drawing-room work. The number in parenthesis, following the subject, is the number by which that subject is identified in the descriptive matter under "Subjects of Instruction."

When a student elects a curriculum, he is required to complete all subjects in that curriculum in order to receive a diploma. No subject may be dropped or omitted without the consent of the Dean.

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I. CIVIL ENGINEERING

The purpose of this curriculum is to give the student an education in those subjects which form the basis of all branches of technical education, and a special training in those subjects comprised under the term "Civil Engineering." It is designed to give the student sound training, both theoretical and practical, in the sciences upon which professional practice is based.

Civil Engineering covers such a broad field that no one can become expert, in its whole extent. It includes Topographical Engineering, Municipal Engineering and Railroad Engineering. It covers land surveying, the construction of sewers, waterworks, roads and streets. All these branches of Engineering rest, however, upon a relatively compact body of principles. The students are trained by practice in the class room, drawing room, and the field.

The curriculum is designed to prepare the young engineer to take up the work of assisting in the location and construction of steam and electric railways, sewerage and water-supply systems, etc.

FRESHMAN YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Mathematics (1).....	2	Trigonometry (2).....	2
Practical Physics (5).....	2	Practical Physics (5).....	2
Mechanical Drawing (6).....	2	Mechanical Drawing (6).....	2

JUNIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Analytical Geometry (3)....	2	Calculus (4).....	2
Surveying (7).....	2	Surveying (7).....	2
Topographical Drawing (8)....	2	Highway Engineering (9).....	2

SENIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Applied Mechanics (12).....	2	Strength of Materials I (13)....	2
Railroad Engineering (10).....	2	Railroad Engineering (10).....	2
Railroad Engineering Drawing (11)	2	Railroad Engineering Drawing (11)	2

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II. MECHANICAL ENGINEERING

This curriculum is designed to give a foundation in those fundamental subjects which form the basis for all professional engineering practice, and especially to equip the young engineer with a knowledge of the various phases of Mechanical Engineering. The course embraces instruction by textbook, lecture, and drawing room.

All the mathematics required in the designing of machinery is given during the first two years so as to prepare for the designing and engineering courses given during the third year. The sequence of subjects from those of an elementary nature to Heat Engineering, Machine Design, and Power Appliances is arranged so that the student may have a complete understanding of the advanced courses.

The curriculum affords training in the methods, and gives practice in the process of construction, which develops in the student the capacity for thinking along mechanical lines, thus enabling him to base all his work upon fundamental principles already learned, rather than upon empirical rules. It gives the student a good theoretical training and meanwhile devotes sufficient time to the practical work, so that he may become a proficient engineer, both in theory and in practice, in the various branches of Mechanical Engineering.

FRESHMAN YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Mathematics (1).....	2	Trigonometry (2).....	2
Practical Physics (5).....	2	Practical Physics (5).....	2
Mechanical Drawing (6).....	2	Mechanical Drawing (6).....	2

JUNIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Analytical Geometry (3).....	2	Calculus (4).....	2
Engineering Drawing (18).....	2	Engineering Drawing (18).....	2
Applied Mechanics (12).....	2	Strength of Materials I (13).....	2

SENIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Heat Engineering (20).....	2	Heat Engineering (20).....	2
Machine Design (19).....	2	Machine Design (19).....	2
Strength of Materials II (14)...	2	Concrete Construction (41).....	2

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III. ELECTRICAL ENGINEERING

The applications of electricity have developed rapidly in recent years, and students are required to have a good working knowledge of Mathematics and Physics. It is essential that students planning to take this course should realize the fundamental necessity of obtaining a solid grounding in these subjects.

The instruction has been carefully balanced between recitations, lectures, home work, reports and laboratory tests in order to develop in the student the power of perception, of rational thinking, and of applying theoretical principles to practical problems.

It is not the purpose of the curriculum to attempt the impossible—to turn out fully trained engineers in any of the various branches of the science. It is designed to lay a thorough foundation for future progress along the lines of work which may particularly appeal to the individual, and give him an adequate working acquaintance with the essential principles which underlie each of the more specialized branches of professional activity. Parallel with the theoretical work runs a carefully planned course of laboratory work which is intended to develop the student's powers of planning work for himself.

FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Periods per week		Periods per week
Mathematics (1).....	2	Trigonometry (2).....	2
Practical Physics (5).....	2	Practical Physics (5).....	2
Mechanical Drawing (6).....	2	Mechanical Drawing (6).....	2

JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Periods per week		Periods per week
Analytical Geometry (3).....	2	Calculus (4).....	2
Direct Currents Lecture (21)...	2	Direct Currents Lecture (21)...	2
Direct Currents Laboratory (22)	2	Direct Currents Laboratory (22)	2

SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Periods per week		Periods per week
Alternating Currents Lectures (23)	2	Alternating Currents Lectures (23)	2
Alternating Currents Laboratory (24).....	2	Alternating Currents Laboratory (24).....	2
Heat Engineering (20).....	2	Heat Engineering (20).....	2

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IV. CHEMISTRY

The growth, within the last few years, of the chemical industry in this country has created a new interest in the science of chemistry. An increasing demand for chemists who possess a comprehensive and intimate knowledge of the general and special fields of the science is felt more and more keenly. The chemist should be thoroughly trained in the methods of research, in order that he may improve the old and initiate new methods of production.

The objective of the first year is to give to the student a thorough knowledge of Inorganic Chemistry with particular emphasis upon those topics which are necessary for a proper understanding of other branches of chemistry.

Theoretical instruction in Qualitative and Quantitative Analysis is given the second year. Both lectures and recitations are used in the instruction of these subjects. Students pursuing this course begin with the determination of simple substances and gradually progress to more complex commercial products. In Organic Chemistry special emphasis is laid on organic synthesis, preparation of dye intermediates, finished dyestuffs and compounds of commercial importance.

FRESHMAN YEAR

FIRST SEMESTER		Periods per week	SECOND SEMESTER		Periods per week
Mathematics (1)	.....	2	Trigonometry (2)	.....	2
Inorganic Chemistry Lectures	(25)	2	Inorganic Chemistry Lectures	(25)	2
Inorganic Chemistry Laboratory	(26)	2	Inorganic Chemistry Laboratory	(26)	2

*JUNIOR YEAR

FIRST SEMESTER		Periods per week	SECOND SEMESTER		Periods per week
Analytical Chemistry Lectures	(27)	2	Analytical Chemistry Lectures	(27)	2
Analytical Chemistry Laboratory	(28)	4	Analytical Chemistry Laboratory	(28)	4

*SENIOR YEAR

FIRST SEMESTER		Periods per week	SECOND SEMESTER		Periods per week
Organic Chemistry Lectures	(29)	2	Organic Chemistry, Lectures	(29)	2
Organic Chemistry, Laboratory	(30)	4	Organic Chemistry, Laboratory	(30)	4

*The work of the second and third years alternate. Second and third year students will take the work together.

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CORNER OF ELECTRICAL LABORATORY

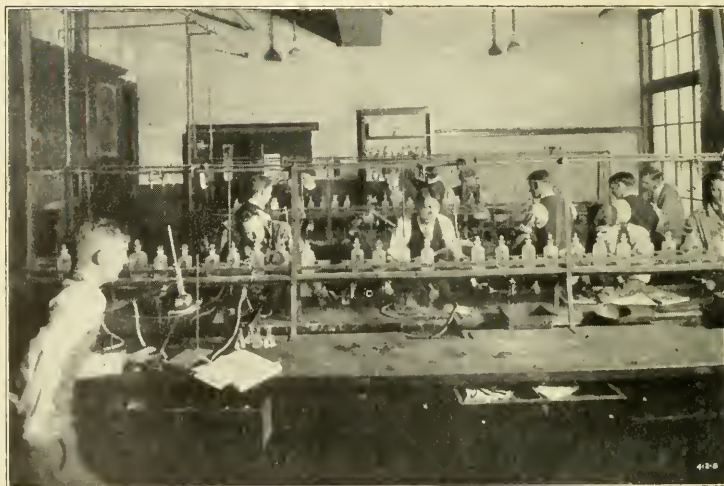


CORNER OF ELECTRICAL EXPERIMENT LABORATORY

EVENING POLYTECHNIC SCHOOL



CLASS IN ANALYTICAL CHEMISTRY LABORATORY



CLASS IN ORGANIC CHEMISTRY

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V. STRUCTURAL ENGINEERING

The purpose of this curriculum is to give the student a special training in those subjects included in the term "Structural Engineering." It is designed to give the student sound and thorough training in the science upon which professional practice is based.

Structural Engineering covers such a broad field that no one can become expert in its whole extent. It includes the design and construction of girders, columns, roofs, trusses, arches, bridges, buildings, walks, dams, foundations and all fixed structures and movable bridges. It includes a knowledge of the relative merits of the design and construction of buildings, bridges, and structures composed of different materials used by the engineer, such as concrete, reinforced concrete, timber, cast iron, and steel.

The curriculum is so arranged as to prepare the young engineer to take up the work of assisting in the design and construction of structures; to undertake intelligently supervision of erection work in the field; and general contracting.

FRESHMAN YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Mathematics (1)	2	Trigonometry (2)	2
Practical Physics (5)	2	Practical Physics (5)	2
Mechanical Drawing (6)	2	Mechanical Drawing (6)	2

JUNIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Analytical Geometry (3)	2	Calculus (4)	2
Applied Mechanics (12)	2	Strength of Materials I (13)	2
Structural Drawing (15)	2	Structural Drawing (15)	2

SENIOR YEAR

FIRST SEMESTER	Periods per week	SECOND SEMESTER	Periods per week
Strength of Materials II (14)	2	Concrete Construction (41)	2
Theory of Structures (16)	2	Theory of Structures (16)	2
Structural Design (17)	2	Structural Design (17)	2

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SUBJECTS OF INSTRUCTION

Instruction is given by means of lectures, recitations, practical exercise in the field, laboratories, and drawing rooms. Great value is set upon the educational effect of these exercises, which constitute the foundation of each of the courses. Text-books are used in many subjects, but not in all. In many branches the instruction given differs widely from available text-books, and in most of such cases, notes on the lectures and laboratory work are furnished to the students. Besides oral examinations in connection with the ordinary exercises, written examinations are held from time to time.

In the following pages will be found a detailed statement of the scope of the subjects offered in the various courses. The subjects are classified, as far as possible, related studies being arranged in sequence.

The subjects are numbered, or numbered and lettered, for convenience of reference in consulting the various curriculum schedules.

Required courses, and those pre-requisite thereto, must have been successfully pursued before any advance course may be taken. In order to carry properly the more advanced subjects, the student must have become proficient in all the elementary subjects. Some studies, specified as being required in preparation, may be taken simultaneously. The student must complete such subjects before starting on more advanced work.

By careful consideration of the curriculum schedules, in connection with the following description of subjects, the applicant for a special course may select, for the earlier part of that course, such subjects as will enable him to pursue later those more advanced subjects which he may particularly desire.

The topics included in the list which follows are subject to change at any time by action of the school authorities.

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SYNOPSIS OF SUBJECTS

Regular Courses

1. Mathematics

Preparation: Elementary Algebra and Elementary Plane Geometry

This course is taken by all regular students during the freshman year, and consist of a general review of algebra up to quadratic equations, and a study of quadratic equations, ratio and proportion, variation, and the use of formulas, with special applications to problems in Physics and Engineering. It also covers a rapid review of the useful theorems of Plane Geometry with special reference to mensuration.

2. Trigonometry

Preparation: 1

This course consists of lectures and recitations covering logarithms, radians, co-ordinates, trigonometric ratios, formulas, law of sines, law of cosines, law of tangents, solution of right and oblique triangles with applications to problems in engineering. Instruction is also given in the theory and use of the slide rule. Practical problems involving the application of trigonometry to engineering are assigned during the entire course.

3. Analytical Geometry

Preparation: 2

In this course instruction is given by lectures and recitations in the following subjects: plotting of functions, interpolation, the straight line, the conic sections, curves represented by various equations of common occurrence in engineering, graphic solution of equations, determination of laws from the data of experiments, simplification of formulas. The plotting and analysis of charts in order to determine empirical formulas is an important part of the course.

4. Calculus

Preparation: 2 and 3

This course is taken by all regular engineering students during the second semester of the junior year. Instruction is

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given by lectures and recitations in the following subjects: rate of change, differentiation, maximum and minimum, integration, definite integrals, with application to the determination of mean value, area, volume, center of gravity and moment of inertia. Problems are assigned to illustrate the use of all the formulas studied in class.

5. Practical Physics

Preparation: 1

This course consists of one lecture and one problem period each week throughout the freshman year. Instruction is given in the practical application of the laws of Physics. Each lecture is accompanied, as far as possible, by lecture table experiments on large-sized apparatus, built especially for this course so that the student may actually see a demonstration of the truth of the various laws, thus enabling him to grasp more readily the underlying principles. This course includes the study of the mechanics of solids, liquids, and gases, heat and its effects, and the principles of light and sound. Practical problems covering each phase of the work are given throughout the year which are designed to fix in the student's mind the principles taken up in the lectures. The problem period gives the student a more thorough understanding of the application of the principles discussed in the lectures by the solution of practical problems.

6. Mechanical Drawing

The course is planned to meet the requirements of a class composed of students who have had no previous instruction in drafting and also for those who may have had one or two years' work in preparatory schools.

Instruction is given in the proper care and use of drawing instruments, T-square, and triangles, and about twenty drawings are made, including geometrical constructions, orthographic and isometric projections, development, dimensioning, and lettering, thus giving the student a thorough training in the fundamental principles of mechanical drawing so that he may easily do the drafting required in his professional course.

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Few formal lectures are given since the class room work is almost entirely individual, permitting the student to progress at a rate commensurate with his own ability.

7. Surveying

Preparation: 2

This course is devoted to the study of surveying instruments, the methods of making surveys, the methods of plotting surveys as completed maps, and the solution of problems in plane surveying. Also, a study of the theory of geodetic surveying, solar and stellar observations, and the adjustments of instruments. Emphasis is laid on field note-keeping and on the construction and use of various plans with which the surveyor should be familiar.

8. Topographical Drawing

Preparation: 6

The first half of the course is devoted to a study of the various conventional symbols used in the drawing of topographical maps. Each student is required to familiarize himself with these symbols and make an inked drawing containing several of them. Reasonable proficiency in the use of and application to maps is expected. The latter part of the course is given over to the making of a contour map from field notes, then applying typical problems of earthwork, such as figuring volumes, balancing cuts and fills, grading, etc.

9. Highway Engineering

Preparation: 7

The course is outlined to give the student the principles and practice of modern highway engineering. This is not entirely a lecture course, for much time is given to the discussion of the relative merits of numerous phases of the subject. The first part of the course considers the preliminary investigation, design, drainage, foundations, and layout, for gravel, earth and broken stone roads, including the use of bituminous materials. The latter part of the course considers several classes of pavements, including bituminous concrete, bituminous

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gravel, and macadam, asphalt, wood-block, stone block, concrete, and brick. Some time is devoted to studying sidewalks, curbs, bridges, culverts, and pipe systems.

10. Railroad Engineering

Preparation: 7

This course consists of instruction in the computation and methods of laying out simple, compound, reverse, vertical and easement curves; frogs, switches, and turnouts; the computation of earthwork from cross-section notes; setting slope-stakes and general consideration of more advanced problems of Railroad Engineering. Special emphasis is laid on field notes and field methods.

11. Railroad Engineering Drawing

Preparation: 6, 10

The first semester is devoted to the construction of a plan and a profile of a preliminary survey for a railroad. This is made from field notes of an actual survey and each student decides on his own location by the aid of a mass diagram. Comparisons are made as to the total cost of each student's location. The second semester is devoted to the design and lay-out of a typical railroad yard as located at the end of a division. This includes the design of reversed curves, ladder tracks and the proper entrance to an engine round house. The course is supplemented by lectures.

12. Applied Mechanics

Preparation: 2, 5

A course of lectures and recitations comprising a study of the general methods and application of statics to structures in equilibrium, including concurrent, parallel, and nonconcurrent systems, and forces in three dimensions. Considerable time is devoted to tension and compression in frames, the computations of the reactions, the method of joints, and the manner of distinguishing members containing bending stresses. Vector diagrams are drawn to show the principles of graphical

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methods. Problems are used and assigned continuously to illustrate the underlying facts of the subject.

13. Strength of Materials I

Preparation: 12

This course comprises the study of the strength of structural shapes in tension, compression, and bending. The subjects stated are the stresses and strains in bodies subjected to tension, compression and shearing; common theory of beams with thorough description of the distribution of stresses, shearing forces, and bending moments; longitudinal shear; slope and deflection; also the design of riveted joints and the stresses in simple frames subjected to external forces.

14. Strength of Materials II

Preparation: 13

This is a continuation of Strength of Materials I in which a study is made of the strength of shafting and springs; combined stresses in beams subjected to tension, compression, bending and torsion; also of the strength of hooks, columns and thin hollow cylinders, and brief consideration of strains and the relation of the stresses on different planes in a body. Kinematics and dynamics are also taken up, including the uniform and varying rectilinear motion, centrifugal force, work, power and kinetic energy.

The methods of testing and the strength of various materials used by the engineer is also taken up in this course. The methods of manufacturing, properties and uses, of materials used in mechanical engineering work, such as iron, steel, and concrete are carefully studied.

15. Structural Drawing

Preparation: 6, 12

The course in structural drawing consists in the working out of various graphical problems of mechanics on the drawing board, drawing standard sections of structural steel shapes, structural details and the preparation of drawings, represent-

NORTHEASTERN UNIVERSITY

ing simple structures. The purpose of this course is to familiarize the student with detailed drawings and teach him where and how to dimension structural parts on working drawings.

16. Theory of Structures

Preparation: 14

This course consists of lectures, recitations and solution of problems. Instruction is given in the fundamental theory of structures, including the theory of beams, trusses, computation of reactions, moments and shears for static and moving loads by the use of shear diagrams, moment diagrams and influence lines. The work in the classroom is supplemented by the solution of practical problems in structural design.

17. Structural Design

Preparation: 15, 16

The course in structural design consists of work in the drawing room. It is a continuation of the course in structural drawing given in the second year, and includes the execution of elementary structural design, taking up in a practical way the principles of the course in Theory of Structures. Each student is given data for various problems, the designs for which he works out in the drawing room, making all necessary computations and executing all drawings necessary for the preparation of complete designs of a number of engineering structures.

18. Engineering Drawing

Preparation: 6

This course is a continuation of Mechanical Drawing, and includes the assembly of detailed drawings and detailing of assembled drawings of machines and machine parts. The principles of mechanism are studied. The problem work takes up the design of pulleys, bolts, belts, gearing, and gear teeth development, cams and quick return motions used in machine tools such as shapers, slotters, and planers.

EVENING POLYTECHNIC SCHOOL

19. Machine Design

Preparation: 14, 18

This course aims to give the student practice in the application of theoretical principles previously studied and at the same time acquaint him with the many practical details which must be considered in design work. The problems taken up in the early part of the course are of a static nature, while the later problems involve dynamic stresses. The problems of the course vary from year to year, but the following are typical of the designs taken up; arbor press, hydraulic flanging, clamp, crane, air compressor, punch and shear, stonecrusher, etc.

In each design the constructive details are carefully considered with special attention to methods of manufacture, provision for wear, lubrication, etc. The work is based on rational rather than on empirical methods, the student being required to make all calculations for determining the sizes of the various parts and all necessary working drawings.

20. Heat Engineering

Preparation: 4, 5

In order to satisfactorily understand the operation of the modern power plant it is essential that the theoretical principles be thoroughly understood. The course is, therefore, in the main theoretical but at all times the practical application of the principles under discussion are kept in view.

The first part of the course covers the laws of perfect gases, the laws of vapors, the use of the steam entropy table, heat transmission and combustion. The rest of the work covered is the application of these principles to air compressors, refrigeration machines, steam power plants and internal combustion engines.

21. Direct Currents, Lectures

Preparation: 5

This course of lectures, recitations and problems during the second year deals with the subject of electrical phenomena in general, and then goes on to apply these principles to the direct current motor and generator, the greater stress being

NORTHEASTERN UNIVERSITY

laid upon the operating characteristics of the various appliances dealt with. The course closes with some consideration of the three-wire system of distribution and calculation of voltage drops leading to the proper arrangement and sizes of feeders and mains.

22. Direct Currents, Laboratory

Preparation: 21 (taken concurrently)

This course is not to be taken by a student who is not at the same time taking (or who has not previously taken) Course 21, unless the student desiring to take it passes satisfactorily an examination upon the entire subject matter of the preparatory course.

The experiments given herein are intended to supplement and illustrate that course as well as give the students an understanding of the principal methods of electrical testing. Each student is required to furnish a complete report, including theory, method of procedure, numerical results and conclusions drawn, for each experiment he performs.

The work in the Laboratory will not begin until after about eight of the lectures in Course 21 have been completed, or until the instructor in that course feels satisfied that sufficient theoretical progress has been made for the student to handle the laboratory apparatus and circuits with safety and use them intelligently.

23. Alternating Currents, Lectures

Preparation: 21

A course of lectures, recitations, and problems during the senior year dealing with the principles of electro-magnetism electro-statics, variable currents, and harmonic currents, including both single and polyphase circuits. With this as a foundation, a careful, thorough and detailed discussion of the construction, theory, operating characteristics and testing of the various types of alternating current machinery is made. The subjects covered being transformers, synchronous generators, synchronous motors, parallel operation of alternators,

EVENING POLYTECHNIC SCHOOL

synchronous convertors, polyphase induction motors, induction generators, single phase induction motors and commutating alternating current motors.

24. Alternating Currents, Laboratory

Preparation: 22 and 23 (taken concurrently)

This course is taken in connection with the corresponding class room work in alternating currents, and the experiments performed are related to that work.

Since the work is considerably more complex and difficult it is even more necessary that the student have adequate preparation, and he must either take Course 23 concurrently (or have already taken it), or pass a satisfactory examination upon the entire subject matter.

The Laboratory instruction will begin after five of the lectures in Course 23 have been covered.

25. Inorganic Chemistry

A course of experimental lectures on the fundamental laws and principles of inorganic chemistry. Emphasis is placed on the study of elements, compounds and theories, which form a basis for more advanced courses in chemistry. Problems of a physio-chemical nature involving the gas laws; application of Avogadro's Hypothesis; the law of definite proportion; electrolytic dissociation and the law of mass action are assigned and discussed in class. Important physical principles including a study of the mechanics of solids, liquids and gases; heat and its effects; and elementary electricity are also given consideration.

26. Inorganic Chemistry, Laboratory

Preparation: 25

By performing a number of selective experiments it is desired to develop a spirit of initiative, self-reliance, and research on the part of the student. It is important that the student performing the experiment observe what happens; consider why it happens; and predict the action of similar substances. The laboratory course is run in conjunction with the lectures,

NORTHEASTERN UNIVERSITY

and experiments which verify principles discussed in class are included. By the preparation of elements and compounds such as oxygen, hydrogen, the halogens, hydrochloric acid, copper sulphate, etc., it is hoped to cultivate a scientific attitude and habit of thought on the part of the student. Neat and satisfactory notes are considered an essential part of the course.

27. Analytical Chemistry, Lectures

Preparation: 25

This course takes up the rudiments of qualitative and quantitative analysis. In qualitative analysis not only the procedures used in the detection of the common elements are studied, but also the general principles involved, including hydrolysis, solubility product, amphoteric electrolytes, laws of solutions, and the general facts of inorganic chemistry. In quantitative analysis half of the time is devoted to gravimetric analysis including chloride, sulphate, and phosphate determinations. The other half of the time is devoted to volumetric analysis as illustrated by acid and alkali determinations, oxidation methods involving bichromate, permanganate, and iodine solutions, and the methods of volumetric precipitation. Special attention is given to the solution of numerical analytical problems of a practical nature.

28. Analytical Chemistry, Laboratory

Preparation: 27

The qualitative laboratory course consists of a series of preliminary experiments illustrating principles and giving an opportunity for practice in writing equations. The analysis of unknown substances is undertaken, beginning with solutions and simple salts, and later analyzing minerals, pigments, slags, alloys and various commercial products, such as boiler compounds, cleaning powders, glass enamels and similar inorganic compounds. The course in quantitative analysis includes the calibration of burettes, the use of analytical balances, and a limited number of typical gravimetric and volumetric analyses in which great stress is laid on the accuracy, care, and integrity necessary for successful quantitative work.

EVENING POLYTECHNIC SCHOOL

29. Organic Chemistry

Preparation: 27, 28

This course is devoted to lectures in the general principles and theories of organic chemistry, the methods of preparation and the characteristic reactions.

The student who is planning to fit himself for a life work in chemistry should take up organic chemistry in the spirit of respect of the magnitude and complexity of the subject. He must go through the difficulties and not over or around them. The subject is presented in a sufficiently elementary manner so as not to be beyond the grasp of the student in his first course in organic chemistry, yet comprehensive enough in that it covers the entire field by taking up practically all of the important groups of compounds.

Emphasis is placed on the study of unsaturation, the influence of structure and substituents on the activity of the radicals.

30. Organic Chemistry, Laboratory

Preparation: 29


This course includes two kinds of laboratory practice:

(a) Organic preparations. In this the student becomes familiar with the more common methods of manipulation and the more important synthetic processes, while the application of theory to the work in hand is constantly emphasized by regular conferences with individual students.

(b) Identification of Pure Organic Compounds. This part of the work has a similar educational value to that afforded by Qualitative Analyses in the inorganic field, and the student is expected to overcome all sources of error so as to acquire confidence in his results.

38. Architectural Drawing I

An elementary course, including the fundamental principles underlying all kinds of mechanical and architectural drawing; geometrical problems; orthographic and isometric projections; classical moldings; Roman alphabet and roof problems.

 In connection with this course the instructor will outline a course of reading in architectural history.

NORTHEASTERN UNIVERSITY

39. Architectural Drawing II

Preparation: 38

The orders of Architecture. Practical architecture and details of construction. In this course the student is taught the component parts of buildings. Typical details of construction are drawn to a large scale and in isometric projection.

40. Architectural Drawing III

Preparation: 39

This course covers the making of complete plans, elevations and working drawings of some elementary problem.

41. Concrete Construction

A course in the theory and practice of concrete construction. It includes the design of foundations, buildings, bridges, and various types of plain and reinforced concrete structures.

EVENING POLYTECHNIC SCHOOL

REGISTER OF STUDENTS Enrolled During the School Year

"S" indicates Special Students

NAME	COURSE	YEAR	HOME ADDRESS
Adler, Arnold H.	V	1927	Brookline
Agar, Denis R.	II	1926	Boston
Akers, Gerald R.	III	1925	East Foxboro
Albert, Max G.	III	1927	Dorchester
Allen, Roy H.	S		Melrose
Anderson, Henry T.	II	1926	Boston
Anderson, James F.	II	1927	Medford
Andrews, Thomas P.	II	1927	Roslindale
Andrich, Alber	III	1926	Buenos Aires
Angell, Arthur A.	S	1927	Billerica
Atkins, Edward	III	1926	Wilmington
Aylward, William J.	S		Boston
Babcock, Robert F.	V	1927	Allston
Ballance, James	S	1925	Boston
Barrett, John N.	I	1927	Chelsea
Barry, Thomas H.	V	1926	Salem
Baxter, Charles E.	I	1926	Auburndale
Beers, Daniel B.	II	1925	Medford
Beldotti, Charles J.	III	1927	Cambridge
Benedict, Lawton D.	III	1927	Medford
Berthel, Charles F.	III	1925	Melrose
Bicknell, Frank H.	V	1927	Canton, Me.
Bird, Whitworth F.	S	1925	Marlboro
Blase, Lawrence C.	III	1927	Boston
Bliss, Clinton F.	III	1927	Somerville
Blomquist, Edwin F.	S	1926	Winthrop
Boardman, Henry C.	I	1927	Norfolk
Bogan, Hugh L., Jr.	S	1925	West Roxbury
Bortnick, Philip	III	1927	Boston
Bourque, Aurele W.	IV	1926	Boston
Bowen, Joseph	V	1927	Roxbury
Brady, Arthur N.	S	1927	Dorchester
Brough, Carroll N.	I	1927	Fitchburg
Brown, Abraham	S		Roxbury
Burbank, John C.	II	1927	Lynn
Bussey, Frederick W.	I	1925	Boston
Butler, Royal P.	IV	1927	Boston
Byrne, James J.	V	1926	Boston
Callanan, Walter	III	1926	Danvers
Camia, Victor	IV	1927	Revere
Campbell, Richard H.	III	1926	Greenfield
Carlson, Andrew B.	I	1927	Melrose
Cassidy, James R.	S	1927	North Billerica
Cave, William E.	II	1927	Allston
Chase, Raymond S.	II	1926	Brockton
Child, George T.	IV	1927	Woburn
Chitjian, Heratchia J.	V	1927	Boston
Clark, Henry W.	I	1927	Waltham

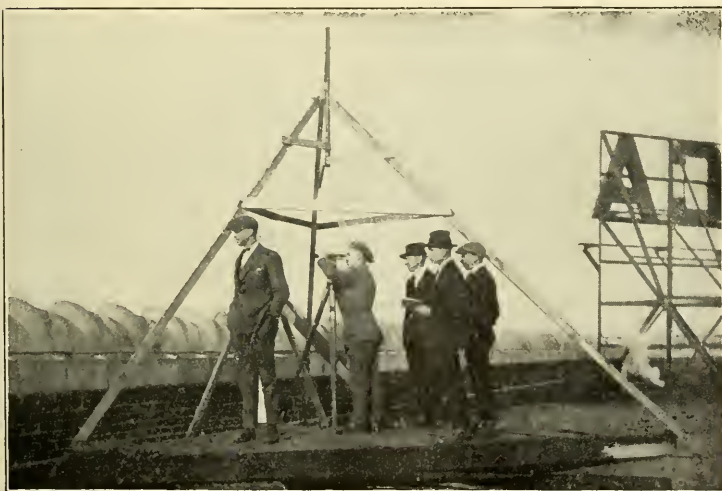
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NAME	COURSE	YEAR	HOME ADDRESS
Cleary, John F.	S	1926	Cambridge
Condon, James T.	I	1927	Rockland
Congdon, Newton W.	III	1927	Foxboro
Congdon, W. Creighton	III	1927	Foxboro
Conti, Hector	III	1926	Buenos Aires
Cook, Philip N.	II	1927	West Somerville
Corcoran, Arthur A.	V	1925	Roxbury
Coyne, John B.	S	1927	Salem
Culbert, Robert R.	S		Boston
Cummings, Richard E.	S	1926	Roslindale
Cunningham, Thomas A.	V	1927	Boston
Curtis, John H.	S		Natick
Cutts, Frank K.	V	1925	Roxbury
Dahlberg, Herman E.	S	1927	Boston
Danskin, Harcourt W.	II	1927	Arlington
Datow, Paul J.	III	1927	East Boston
Day, Walter P.	III	1927	New York
DeModena, Leo	II	1925	East Boston
d'Entremont, Earl J.	S	1927	Roslindale
DeRoa, Abbott	III	1927	Winthrop
DeSena, Philip J.	S	1927	East Boston
Devin, John J.	S	1927	Boston
Doherty, Hugh J.	IV	1927	Boston
Donovan, Cornelius F.	III	1927	Cambridge
Donovan, Henry L.	V	1925	Dorchester
Dresser, Willis	S	1927	South Boston
Drohen, Leo J.	III	1927	East Boston
Dunphy, Harold H.	V	1926	Island Falls, Me.
Dwyer, Thomas V.	I	1926	Watertown
Eagan, William J.	IV	1927	Peabody
Earle, Roland D.	IV	1925	Boston
Einbinder, Harry	III	1927	Boston
Espintu, Domingo	III	1927	Boston
Fawcett, William J.	III	1927	Cambridge
Fennessey, William E.	II	1927	Hyde Park
Ferrarini, Leo	V	1927	Somerville
Field, Franklin W.	III	1927	Boston
Finnegan, Edward F.	II	1927	South Braintree
Fishman, Joseph	IV	1925	Lynn
Fitch, Edson L.	III	1926	Roxbury
Fitzgerald, William J.	II	1926	Salem
Flaherty, James A.	III	1927	Dorchester
Forrest, Emery V.	S	1927	Norwood
Freckleton, Clarence	III	1927	Boston
Fultz, Harold F.	S	1925	Hingham
Fyler, William P.	III	1927	Somerville
Gavin, William A.	V	1926	Boston
Gilbert, Samuel	II	1925	Chelsea
Gonia, Walter H.	S	1927	Quincy
Goodman, Harry	S		Roxbury
Goodwin, Theodore R.	S		Winchester
Gorman, Paul	III	1925	Lynn
Grant, Emery F.	S	1926	Boston
Greene, David E.	II	1927	Brockton

NORTHEASTERN UNIVERSITY



CLASS IN MECHANICAL DRAWING



TRIANGULATION SURVEYING

EVENING POLYTECHNIC SCHOOL



SECTION OF MECHANICAL LABORATORY



CLASS IN RAILROAD ENGINEERING

EVENING POLYTECHNIC SCHOOL

NAME	COURSE	YEAR	HOME ADDRESS
Griffin, John T.	III	1927	Quincy
Griffith, Percy R.	II	1927	Watertown
Guarciarriello, Anthony	V	1926	Boston
Gulesian, Manuel	S	1927	Mattapan
Guptill, Lawrence W.	V	1926	Somersworth, N. H.
Hally, Albert A.	III	1927	Ashland
Halpin, James E.	I	1927	Malden
Hammer, George S.	IV	1925	Lynn
Hanscom, Willis A.	S		Hyde Park
Harrington, Robert S.	III	1927	Stoneham
Harris, G. M.	S	1926	Boston
Hart, Stephen F.	II	1927	Dorchester
Hayes, John L.	II	1926	Salem
Hedberg, Carl E.	III	1927	Boston
Hedblom, Byron C.	II	1925	Woburn
Hill, Leonard F.	III	1925	Hyde Park
Hoen, H. H.	S	1925	Cambridge
Horne, Chester F.	III	1925	Marblehead
Hosman, William F.	III	1926	Peabody
Hue, Walter T.	I	1927	Boston
Hurlbert, George A.	III	1927	Dorchester
Huske, Charles	III	1925	Quincy
Jacot, Louis F.	S	1927	Boston
Jenney, John B.	II	1927	Gloucester
Johnson, Benjamin	I	1927	Revere
Johnson, Harry M.	II	1925	Everett
Johnson, Olaf H.	III	1925	Dorchester
Johnson, Walter A.	IV	1927	West Somerville
Jones, Louis F.	II	1926	Wollaston
Kaplan, Lewis J.	S		Revere
Kappler, Theodore W.	V	1927	Quincy
Kelly, Thomas J.	III	1927	Boston
King, Edward E.	III	1926	Norwood
King, Ernest S.	III	1926	Norwood
Knox, Maynard P.	III	1927	Somerville
Larson, Nils H.	III	1926	Roslindale
Lewis, Bruce	S	1926	Arlington Heights
Lynch, Allan J.	III	1927	Newton Lower Falls
Lynch, Bartholomew J.	I	1927	Dorchester
MacDonald, Gurney H.	V	1925	Medford
MacDonald, Harold L.	V	1926	Forest Hills
MacDonald, Robert E.	III	1927	West Bridgewater
MacKay, Albert T.	III	1926	Boston
MacKeen, Claude E.	I	1927	Boston
MacLean, Eliot B.	II	1925	Lowell
MacLean, Sydney F.	III	1926	Malden
MacMillan, James H.	S	1926	Cambridge
Malkowski, Peter C.	I	1926	Salem
Margolis, Abraham A.	S	1926	Beverly
Maroney, John A.	IV	1926	Jamaica Plain
Masi, Joseph C.	III	1927	Stoneham
Mavraides, William P.	IV	1925	Haverhill
Meikle, Gordon	V	1927	Marblehead
Meldrum, George D.	V	1926	West Roxbury

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NAME	COURSE	YEAR	HOME ADDRESS
Meletti, Frank	III	1927	<i>Somerville</i>
Meserve, Arthur G.	III	1927	<i>Revere</i>
Messer, Arthur E.	V	1927	<i>East Boston</i>
Metcalf, Raymond S.	IV	1927	<i>West Somerville</i>
Mill, John	I	1926	<i>Dedham</i>
Miller, Morris	I	1927	<i>Boston</i>
Mitchell, Charles B.	I	1926	<i>Lawrence</i>
Morrison, John	I	1926	<i>Boston</i>
Morrissey, James R.	I	1926	<i>Boston</i>
Mowat, William C.	III	1927	<i>Winthrop</i>
Mulcahy, Robert W.	III	1927	<i>Boston</i>
Mulkerin, M. Joseph	III	1927	<i>South Boston</i>
Mullen, John J.	V	1927	<i>Brighton</i>
Mumford, Warren H.	S		<i>Boston</i>
Murphy, Arthur E.	III	1927	<i>Boston</i>
Murphy, Francis X.	II	1927	<i>Dorchester</i>
Murphy, Joseph X.	IV	1925	<i>Peabody</i>
Murray, John L.	S	1927	<i>Boston</i>
Mylott, Henry G.	V	1926	<i>Forest Hills</i>
McGovern, Thomas C.	I	1926	<i>Dorchester</i>
McGrath, Joseph W.	II	1926	<i>Chelsea</i>
McLucas, George H.	IV	1927	<i>Charlestown</i>
McLucas, Willard F.	III	1927	<i>Watertown</i>
McMakin, Charles E.	III	1926	<i>Boston</i>
McNally, George E.	III	1927	<i>Boston</i>
Neily, Guy E.	V	1927	<i>Everett</i>
Nelson, Francis	III	1927	<i>Roxbury</i>
Nelson, James H.	V	1926	<i>Melrose</i>
Nelson, Walter A.	II	1925	<i>Dorchester</i>
Nikola, Toivo H.	V	1926	<i>Gloucester</i>
Oberhauser, Fred A.	S	1926	<i>Brighton</i>
O'Brien, John F.	V	1927	<i>Watertown</i>
Ohlson, Emanuel A.	S	1927	<i>Everett</i>
Oliver, Leland W.	IV	1927	<i>Lynn</i>
Ostrer, Herman	I	1927	<i>Dorchester</i>
Otis, David W.	II	1927	<i>Woburn</i>
Parker, Joseph E.	S	1927	<i>Malden</i>
Paris, Sedney	III	1927	<i>Dorchester</i>
Patterson, James F.	S	1926	<i>Dorchester</i>
Pernana, Charles	V	1927	<i>Chelsea</i>
Perlot, George E.	III	1927	<i>Jamaica Plain</i>
Petersen, Alfred J.	II	1927	<i>Raynham</i>
Pierce, Raymond H.	S		<i>Arlington</i>
Piper, Ernest B.	S	1927	<i>Newton Center</i>
Piper, Edward E.	I	1927	<i>Quincy</i>
Plimpton, Rodney F.	III	1927	<i>Somerville</i>
Plugge, George E.	V	1927	<i>Dorchester</i>
Polson, Alver E.	S	1927	<i>Fitchburg</i>
Porter, Harry A.	I	1927	<i>Everett</i>
Powell, Giles B.	V	1925	<i>Dorchester</i>
Powers, John B.	S	1927	<i>Quincy</i>
Preble, Joseph W.	V	1927	<i>Medford</i>
Presser, Harry	III	1927	<i>Roxbury</i>
Presutti, Achille	S	1926	<i>Everett</i>

EVENING POLYTECHNIC SCHOOL

NAME	COURSE	YEAR	HOME ADDRESS
Purchase, Harry B.	V	1925	Quincy
Rasmus, Stanley	II	1926	West Roxbury
Reidell, Alexander E.	I	1927	Dorchester
Richardson, Harry G.	III	1927	Brockton
Richardson, Warren O.	S	1925	Waltham
Robbins, William F.	I	1927	Boston
Robinson, Ashley Q.	V	1925	Newton
Rogers, George E.	I	1926	East Dedham
Rosen, Nathan	III	1927	Dorchester
Rozbicky, William	S	1926	Chelsea
Russell, Warner H.	I	1926	Haverhill
Ryder, Donald H.	S	1927	Newton
Sampson, Clifford W.	II	1927	Canton
Scott, Carroll	S	1927	Medford
Shaw, Arthur L.	III	1927	Melrose Highlands
Simmonds, Leonard C.	S	1927	Mattapan
Sines, Russell V.	V	1925	Quincy
Smith, Charles E.	III	1925	Medford
Snetsky, Henry	III	1927	Chelsea
Solimando, Michael	V	1925	Boston
Somes, George G.	V	1927	Malden
Spillane, Patrick J.	S		Reading
Stockwell, Lawrence F.	III	1925	Millbury
Stone, Edward C.	III	1927	Everett
Stowe, James	II	1927	Roxbury
Sullivan, Francis J.	III	1926	Cambridge
Sullivan, Thomas B.	V	1927	Melrose
Tarr, Lewis L.	V	1926	Haverhill
Tarr, Melville S.	I	1926	Chelsea
Tebbetts, George F.	III	1927	Arlington Heights
Thomas, Carl H.	II	1927	Medford
Thorpe, Harold C.	III	1927	Arlington
Tomasello, Joseph P.	I	1927	Dorchester
Tracy, Leonard	II	1927	Somerville
Tripp, Frederick L.	I	1926	Taunton
Turnberg, Carl J.	III	1927	Dorchester
Turner, Anthony J., Jr.	II	1927	Swampscott
Ullstrom, David O.	V	1927	Wollaston
Ventola, Alfred E.	III	1925	Hyde Park
Walker, John G.	III	1927	Boston
Wardwell, E. Malcolm	III	1927	Revere
Wasson, Robert Ed.	III	1927	Cambridge
Waterman, Harley R.	III	1927	Boston
Waxman, Joseph G.	S		Danvers
Weber, Henry F.	IV	1925	Jamaica Plain
Wilkinson, Henry D.	S	1926	Boston
Williams, Harold E.	III	1926	Chelsea
Williams, Mortimer G.	III	1927	Marlboro
Wilson, Leonard S.	III	1927	East Boston
Wilson, Robert A.	III	1927	Boston
Wilson, Samuel	III	1927	Everett
Wirt, Donald R.	V	1927	Boston
Wolek, Samuel	V	1927	Revere
Wolfers, Henry L.	III	1926	Roxbury

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NAME	COURSE	YEAR	HOME ADDRESS
Wood, John A.	III	1927	<i>Beverly</i>
Woodberry, Gordon F.	I	1925	<i>Danvers</i>
Woodman, Norman L.	II	1927	<i>Medford</i>
Woodworth, Ernest H.	II	1926	<i>Newton</i>
Woolston, Raymond W.	III	1927	<i>Waban</i>
Young, James E.	III	1925	<i>Cambridge</i>
Zaboly, Joseph	V	1927	<i>Malden</i>
Zwicker, Earle F.	II	1927	<i>Wollaston</i>

NUMERICAL DISTRIBUTION OF STUDENTS BY COURSES

Civil.	31
Mechanical.	44
Electrical.	86
Chemical.	19
Structural.	45
Special.	46
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Total.	271

SENIORITY SUMMARY OF STUDENTS

Seniors.	40
Juniors.	64
Freshmen.	154
Unclassified.	13
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Total.	271

EVENING POLYTECHNIC SCHOOL

RESIDENCE BY CITIES AND TOWNS

Allston.....	2	Mattapan.....	2
Arlington.....	3	Medford.....	9
Arlington Heights.....	2	Melrose.....	5
Ashland.....	1	Melrose Highlands.....	1
Auburndale.....	1	Millbury.....	1
Beverly.....	2	Natick.....	1
Billerica.....	1	Newton.....	3
Boston.....	47	Newton Center.....	1
Brighton.....	2	Newton Lower Falls.....	1
Brockton.....	3	New York.....	1
Brookline.....	1	Norfolk.....	1
Buenos Aires.....	2	North Billerica.....	1
Cambridge.....	9	Norwood.....	3
Canton.....	1	Peabody.....	3
Canton, Me.....	1	Quincy.....	8
Charlestown.....	1	Raynham.....	1
Chelsea.....	8	Reading.....	1
Danvers.....	3	Revere.....	6
Dedham.....	1	Rockland.....	1
Dorchester.....	20	Roslindale.....	4
East Boston.....	6	Roxbury.....	10
East Dedham.....	1	Salem.....	5
East Foxboro.....	1	Somersworth, N. H.....	1
Everett.....	7	Somerville.....	7
Fitchburg.....	2	South Boston.....	2
Forest Hills.....	2	South Braintree.....	1
Foxboro.....	2	Stoneham.....	2
Gloucester.....	2	Swampscott.....	1
Greenfield.....	1	Taunton.....	1
Haverhill.....	3	Waban.....	1
Hingham.....	1	Waltham.....	2
Hyde Park.....	3	Watertown.....	4
Island Falls, Me.....	1	West Bridgewater.....	1
Jamaica Plain.....	3	West Roxbury.....	3
Lawrence.....	1	West Somerville.....	3
Lowell.....	1	Wilmington.....	1
Lynn.....	5	Winchester.....	1
Malden.....	5	Winthrop.....	3
Marblehead.....	2	Woburn.....	3
Marlboro.....	2	Wollaston.....	3

NORTHEASTERN UNIVERSITY

RATES OF TUITION

Regular Three-Year Courses

Tuition fee for each year of the regular curriculums is sixty dollars payable as follows:

One-half upon entering

One-fourth on Monday of the tenth school week

One-fourth on Wednesday of the eighteenth school week

The foregoing rates include membership in the Boston Young Men's Christian Association.

Individual Engineering Subjects

(Arranged alphabetically by subjects)

SUBJECT NUMBER	COURSE	NUMBER OF CLASS HOURS	TUITION
23	Alternating Currents, Lectures.....	28	\$20.00
24	Alternating Currents, Laboratory.....	28	20.00
27*	Analytical Chemistry, Lectures.....	28	20.00
28*	Analytical Chemistry, Laboratory.....	56	40.00
3	Analytical Geometry.....	14	10.00
12	Applied Mechanics.....	14	10.00
38	Architectural Drawing I.....	28	20.00
39	Architectural Drawing II.....	28	20.00
40	Architectural Drawing III.....	28	20.00
4	Calculus.....	14	10.00
41	Concrete Construction.....	14	10.00
21	Direct Currents, Lectures.....	28	20.00
22	Direct Currents, Laboratory.....	28	20.00
18	Engineering Drawing.....	28	20.00
20	Heat Engineering.....	28	20.00
9	Highway Engineering.....	14	10.00
25	Inorganic Chemistry, Lectures.....	28	20.00
26	Inorganic Chemistry, Laboratory.....	28	20.00
19	Machine Design.....	28	20.00
6	Mechanical Drawing.....	28	20.00
1	Mathematics.....	14	10.00
29*	Organic Chemistry, Lectures.....	28	20.00
30*	Organic Chemistry, Laboratory.....	56	40.00
5	Practical Physics.....	28	20.00
10	Railroad Engineering.....	28	20.00
11	Railroad Engineering Drawing.....	28	20.00
13	Strength of Materials I.....	14	10.00
14	Strength of Materials II.....	14	10.00
17	Structural Design.....	28	20.00
15	Structural Drawing.....	28	20.00
7	Surveying.....	28	20.00
16	Theory of Structures.....	28	20.00
8	Topographical Drawing.....	14	10.00
2	Trigonometry.....	14	10.00

The individual rates above are in addition to membership in the Y.M.C.A.

*Given in alternate years.

EVENING POLYTECHNIC SCHOOL

COURSES OF INSTRUCTION

Schedule of Engineering Subjects

(Arranged alphabetically by subjects)

SUBJECT NUMBER	SUBJECT	EVENINGS	TIME
23	Alternating Currents, Lectures.	Mon.	7:00—9:00
24	Alternating Currents, Laboratory. . .	Wed.	7:00—9:00
27†	Analytical Chemistry, Lectures.	Mon.	7:00—9:00
28†	Analytical Chemistry, Laboratory. . .	Wed. and Thurs.	7:00—9:00
3	Analytical Geometry.	Mon.	7:00—9:00
12	Applied Mechanics.	Thurs.	7:00—9:00
38	Architectural Drawing I.	Mon.	7:00—9:00
39	Architectural Drawing II.	Mon.	7:00—9:00
40	Architectural Drawing III.	Mon.	7:00—9:00
4*	Calculus.	Mon.	7:00—9:00
41*	Concrete Construction.	Mon.	7:00—9:00
21	Direct Currents, Lectures.	Thurs.	7:00—9:00
22	Direct Currents, Laboratory.	Wed.	7:00—9:00
18	Engineering Drawing.	Wed.	7:00—9:00
20	Heat Engineering.	Thurs.	7:00—9:00
9*	Highway Engineering.	Thurs.	7:00—9:00
25	Inorganic Chemistry, Lectures.	Wed.	7:00—9:00
26	Inorganic Chemistry, Laboratory. . .	Thurs.	7:00—9:00
19	Machine Design.	Wed.	7:00—9:00
6	Mechanical Drawing.	Wed.	7:00—9:00
1	Mathematics.	Mon.	7:00—9:00
29†	Organic Chemistry, Lectures.	Thurs.	7:00—9:00
30†	Organic Chemistry, Laboratory.	Mon. and Wed.	7:00—9:00
5	Practical Physics.	Thurs.	7:00—9:00
10	Railroad Engineering.	Wed.	7:00—9:00
11	Railroad Engineering Drawing.	Mon.	7:00—9:00
13*	Strength of Materials I.	Thurs.	7:00—9:00
14	Strength of Materials II.	Mon.	7:00—9:00
17	Structural Design.	Tues.	7:00—9:00
15	Structural Drawing.	Tues.	7:00—9:00
7	Surveying.	Wed.	7:00—9:00
16	Theory of Structures.	Thurs.	7:00—9:00
8	Topographical Drawing.	Thurs.	7:00—9:00
2*	Trigonometry.	Mon.	7:00—9:00

*Second Term Courses.

†Given in alternate years.

NORTHEASTERN UNIVERSITY

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EVENING POLYTECHNIC SCHOOL

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Date

Carl S. Ell, Dean,
Northeastern University,
Evening Polytechnic School,
Boston 17, Mass.

Please furnish me further information on the following
points:.....

.....

.....

.....

Signed.....

Street.....

City and State.....

The following named men are interested in the Evening
Polytechnic School. Please send them a catalog.

NameCity.....

Address.....State

NameCity.....

Address.....State

NORTHEASTERN UNIVERSITY

DAY SCHOOLS

SCHOOL OF ENGINEERING

Four-year courses in Civil, Mechanical, Electrical, Chemical, and Administrative Engineering, leading to the degrees of Bachelor of Civil, Mechanical, Electrical, Chemical and Administrative Engineering. Conducted in co-operation with engineering firms. Students earn while they learn. Work conducted at Boston.

SCHOOL OF BUSINESS ADMINISTRATION

Four-year course in Business Administration leading to the degree of Bachelor of Business Administration. Students may specialize in Industrial Management, Marketing, Finance, Accounting, and Sales Management. A two-year course leading to a Junior Certificate. Work conducted at Boston.

EVENING SCHOOLS

SCHOOL OF LAW

(Co-educational)

Four-year course leading to the degree of Bachelor of Laws. Preparation for bar examinations and practice. High scholastic standards. A much larger percentage of graduates pass bar examinations than of any other evening law school in New England. Work conducted at Boston, and in Divisions at Worcester, Springfield, and Providence.

SCHOOL OF COMMERCE AND FINANCE

(Co-educational)

Four-year courses in Professional Accounting, Marketing, and Business Administration, with specialization in banking, finance, insurance, and other fields, leading to the degrees of Bachelor and Master of Commercial Science. Special two-year courses for those desiring intensive specialization. Work conducted at Boston, and in the Divisions at Worcester, Springfield, Providence, Bridgeport, and New Haven.

NON-COLLEGIATE SCHOOLS

EVENING POLYTECHNIC SCHOOL

Three-year courses offered in the Evening Polytechnic School lead to a diploma in Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemistry or Structural Engineering. The work offered in these courses, while not as extensive as that leading to a degree, meets standard requirements. Students are trained for positions of trust and responsibility.

NORTHEASTERN PREPARATORY SCHOOL

Courses in usual high school subjects leading to a diploma. Three sixteen-week terms each year. It is possible for students to meet college entrance requirements in from three to five years. Work conducted at Boston and in Divisions at Worcester, New Haven, and Providence.

NORTHEASTERN AUTOMOTIVE SCHOOL

Courses in all phases of the automotive industry with special instruction for owners, salesmen, mechanics, and chauffeurs. Classes are conducted both day and evening

VOCATIONAL INSTITUTE

A diversified program of short intensive courses in Blueprint Reading, Public Speaking, Practical Trade Mathematics, Mechanical Drawing, Estimating, Civil Service, English for Educated Foreigners, etc.

For further information concerning any of the above schools, address

NORTHEASTERN UNIVERSITY
316 Huntington Avenue, Boston, Massachusetts

NORTHEASTERN PREPARATORY SCHOOL

CATALOG

Boston Young Men's Christian Association
316 Huntington Avenue Boston 17, Mass.

Northeastern University

DAY SCHOOLS

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For further information concerning any of the above schools, address

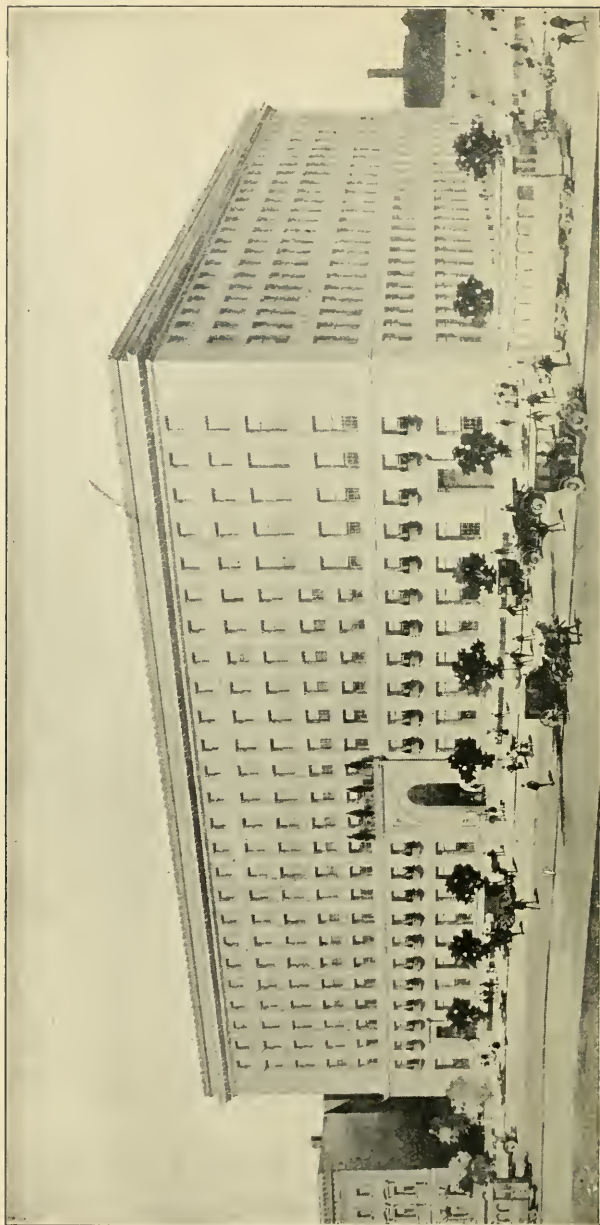
NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts

NORTHEASTERN PREPARATORY SCHOOL

The evening school which enables young men who are employed to obtain a standard high school education.

Northeastern Preparatory School is affiliated with Northeastern University of the Boston Young Men's Christian Association, and is located in Boston.



ASSOCIATION BUILDING

CALENDAR

Spring Term—1925

January 19-23	Registration Week
January 27	Opening of Term
May 12-15	Final Examinations
May 15	Close of Term

Summer Term—1925

May 18-22	Registration Week
May 26	Opening of Term
September 8-11	Final Examinations
September 11	Close of Term

Fall Term—1925

September 14-18	Registration Week
September 22	Opening of Term
December 21-25	Christmas Recess
January 12-15	Final Examinations
January 15	Close of Term

Spring Term—1926

January 18-22	Registration Week
January 26	Opening of Term
May 11-14	Final Examinations
May 14	Close of Term

Summer Term—1926

May 17-21	Registration Week
May 25	Opening of Term
September 7-10	Final Examinations
September 10	Close of Term

Fall Term—1926

September 13-17	Registration Week
September 21	Opening of Term
December 20-24	Christmas Recess
January 11-14	Final Examinations
January 14	Close of Term

Northeastern Preparatory School

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Northeastern University

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GALEN DAVID LIGHT, A.B.

Secretary of the University

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President of the University

GALEN DAVID LIGHT, A.B.

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and Finance*

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Director of Secondary Schools

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Evening Polytechnic School

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Northeastern Preparatory School

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Northeastern Automotive School

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Vocational Institute

CHARLES HENRY SAMPSON, B.S., *Principal*

Special Advisors

FRANK BONNYMAN CAWLEY, B.S.

Director of Physical Education

ERNEST HENRY TIPPETT

Director of Religious Education

Northeastern Preparatory School

BOSTON

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Director

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(University of Maine)

Principal

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Mathematics

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Natural Sciences

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(Harvard University)

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(Harvard University)

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(Sloyd Training School)

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(Yale University)

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(Colby College)

French

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(Harvard University)
Head of English Department

CHARLES FREEMAN SEAVERNS
(Harvard University)
Mathematics

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(Boston University)
Head of Commercial Department

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(Colby College)
Mathematics

DANIEL P. A. WILLARD, B.S.
(New Hampshire University)
Social Sciences

MYRA EDNA WHITE
Librarian

DORIS HUNT
Secretary

JESSIE LEBARON JENKINS
Bookkeeper

Northeastern Preparatory School

HISTORY

Northeastern Preparatory School, formerly called the Evening Preparatory School, was founded in 1897, to meet the demand for instruction by men employed during the day. Since then the School has grown steadily, until today it offers work of the same standard as that maintained by day secondary schools. The school has prepared men for Harvard, Yale, Massachusetts Institute of Technology, Brown, Boston University, Tufts, Dartmouth, Northeastern, and other colleges. Some of these men have obtained their entire preparation here; others have completed preparation begun elsewhere.

The enrollment has increased from fewer than fifty students, at the beginning, to one thousand. To keep pace with this growth, the School has gradually developed a large and efficient teaching force; to do more thorough and intensive work, it has standardized and carefully outlined the courses of study.

Mere numbers, however, afford no index to the worth of a school. That worth is determined rather by the quality of work the institution performs and this in turn depends on the character of its teachers and its students. The staff of Northeastern Preparatory School consists of college and university trained men of large teaching experience who know and are in sympathy with the aims and purposes of the students. These latter constitute a body of earnest men who have entered upon their educational work as a part of the business of life, rather than as a social accomplishment, and they come, in the main, from homes in which the habits of industry and economy are habitually fostered. They feel the necessity of increasing their vocational opportunities and usually enter the evening school with definite aims for the future. Practically all the students are engaged in work during the day.

AIM

The aim of Northeastern Preparatory School is to prepare young men of intense purpose for colleges, scientific schools, or the advanced schools of Northeastern University, or to

help them better their business positions. The subjects offered are those commonly given in the eighth grade of a grammar school and in the four years of a day high school. The amount of school work covered in each subject, during any two terms of sixteen weeks each, is the same as covered in a year of a standard day high school. This is made possible by the detailed and efficient organization of courses, by emphasis upon important points, and also by the earnest attitude of our students.

EQUIPMENT

The location, surroundings and physical appointments of a school are of primary importance. The location should be healthful, accessible and attractive; buildings should be heated, lighted and ventilated so as to promote the health and progress of students at all seasons of the year.

The buildings occupied by Northeastern Preparatory School fulfill these requirements. Their location on Huntington Avenue, in a section of Boston noted for its institutions of learning, makes them accessible from all parts of the city and suburbs, and free from outside influences which distract the attention. On looking at the buildings from the front, one gains the impression of a single large, square structure, but there are in reality six buildings,—Administration, Assembly, Educational, Natatorium, Gymnasium and Vocational,—each on its own foundation, connected by corridors and bridges. This arrangement gives them all good light and air, and makes for close co-operation among the various units.

The equipment of the classrooms is excellent. The rooms are airy, well lighted and ventilated, and comfortable in temperature both summer and winter. They have slate blackboards, roomy seats, individual desks, and wall tints that are restful to the eyes. The School is adequately supplied with maps and charts.

The laboratory equipment is thoroughly modern and is extensive enough to furnish material for many students working at the same time. There are three chemical laboratories and one physics laboratory. The mechanical drawing room is unusually large and has every convenience for work of all grades.

ADMISSION

Any young man of good moral character, regardless of occupation or creed, who has completed at least six grades of a grammar school course, or the equivalent, may enroll in the School.

Courses adapted to the needs and education of such applicants are offered each term. It is not advisable, however, for one younger than fifteen years of age to register, for the courses are adapted to those who are more mature and are physically able to work during the day and to study at night.

REQUIREMENTS FOR GRADUATION

The diploma is granted upon completion of fifteen units, of which at least four must have been earned in the North-eastern Preparatory School. Candidates are expected to complete four years of English, which count as three units toward the diploma or college-entrance requirements.

A unit of work, as counted by the College Entrance Examination Board, is the amount covered in a single standard subject during a year's work in a standard day high school, the equivalent of which is covered by this School in two terms of sixteen weeks each.

The courses described in this catalogue form the entire offering of the School. Most of these are scheduled every term; a few in alternate terms or every third term. An announcement is made in advance of each registration period of the courses for the following term, together with the days and hours when each class will meet. Any secondary school subject, however, will be offered if six or more men wish to take it, even if it does not appear in the announcements or in this catalogue.

CERTIFICATES

A suitable certificate is issued after a student has completed a course with a satisfactory grade. Students are encouraged to obtain as many of these as possible. Each one denotes a definite accomplishment in a particular subject.

Suggested Courses of Study

CLASSICAL COURSE

Candidates for Harvard and for classical courses in other colleges should select the following:

Required Units

(13 units)

English	3*	History	1
Latin	3	Algebra	2
Modern Language	2	Plane Geometry	1
Science	1		

Elective Units

(Choose 2 units)

French	3	Physics	1
German	3	Chemistry	1
History	2	Solid Geometry	$\frac{1}{2}$
Government	$\frac{1}{2}$	Trigonometry	$\frac{1}{2}$

(A total of 15 units is required for Harvard)

SCIENTIFIC COURSE

Candidates for the Massachusetts Institute of Technology and other scientific and technical schools should select the following:

Required Units

(13 units)

English	3*	Solid Geometry	$\frac{1}{2}$
French or German	3	Trigonometry	$\frac{1}{2}$
History	1	Physics	1
Algebra	2	Chemistry	1
Plane Geometry	1		

Elective Units

(Choose 1 unit)

Elementary French	2	Spanish	2
Advanced French	1	Mechanical Drawing	1
Elementary German	2	Latin	2
Advanced German	1	History (additional)	1

(A total of $13\frac{1}{2}$ units is required for the Massachusetts Institute of Technology)

*Four courses in English are regularly computed as *three* units for college entrance.

GENERAL PREPARATORY COURSE

The number of units required for admission and also the freedom of choice vary with the several colleges. The principal will be glad to advise students regarding their selection. The following is suggested as typical:

Required Units

(9 or 10 units)

English	3*	Science	1
Foreign Language	2	Algebra	1 or 2
History	1	Plane Geometry	1

Elective Units

(Choose 6 or 5 units)

Ancient History	1	Chemistry	1
Bookkeeping	1	Commercial Arithmetic...	$\frac{1}{2}$
European History	1	Commerce and Industry..	$\frac{1}{2}$
French	2 or 3	Mechanical Drawing	1
German	2 or 3	Physics	1
Government	$\frac{1}{2}$ or 1	Solid Geometry	$\frac{1}{2}$
Latin	2 or 4	Spanish	2 or 3
U. S. History	1	Trigonometry	$\frac{1}{2}$
Economics.....	$\frac{1}{2}$ or 1		

(A total of 15 units is the usual requirement)

NORTHEASTERN UNIVERSITY

SCHOOL OF LAW

(Evening Sessions)

Required Units

English	3*
---------------	----

Recommended Units

Economics	$\frac{1}{2}$ or 1	History	1 to 3
Government	$\frac{1}{2}$ or 1	Latin	1 or 2

Elective Units

Algebra	1 or 2	Commercial Arithmetic ...	$\frac{1}{2}$
Plane Geometry	1	Commerce and Industry..	$\frac{1}{2}$
Bookkeeping	1	Mechanical Drawing	1
French	2 or 3	Physics	1
German	2 or 3	Solid Geometry	$\frac{1}{2}$
Chemistry	1	Spanish	2 or 3
Trigonometry.....	$\frac{1}{2}$		

(A total of 15 units is required)

SCHOOL OF COMMERCE AND FINANCE

(Evening Sessions)

Required Units

English	3*
---------------	----

*Four courses in English are regularly computed as *three* units for college entrance.

Recommended Units

Commercial Arithmetic .. $\frac{1}{2}$	Economics .....1
Algebra .....1	Government .....1
Plane Geometry .....1	U. S. History .....1

Elective Units

Latin .....2 or 4	Chemistry .....1
Ancient History .....1	Commerce and Industry.. $\frac{1}{2}$
Bookkeeping .....1	Mechanical Drawing .....1
European History .....1	Physics .....1
French .....2 or 3	Solid Geometry $\frac{1}{2}$
German .....2 or 3	Spanish .....2 or 3
Trigonometry..... $\frac{1}{2}$	

(A total of 15 units is required)

SCHOOL OF BUSINESS ADMINISTRATION

(Day Sessions)

Required Units

English	3*
---------------	----

Recommended Units

Commercial Arithmetic .. $\frac{1}{2}$	
Algebra .....1	Government .....1
Plane Geometry .....1	U. S. History .....1

Elective Units

Economics .....1	Chemistry .....1
Latin .....2 or 4	Commerce and Industry.. $\frac{1}{2}$
Ancient History .....1	Mechanical Drawing .....1
Bookkeeping .....1	Physics .....1
European History .....1	Solid Geometry .....1
French .....2 or 3	Spanish .....2 or 3
German .....2 or 3	Trigonometry $\frac{1}{2}$

(A total of 15 units is required)

SCHOOL OF ENGINEERING

(Day Sessions—Co-operative and Full-time Plans)

Required Units

(6 units)

English	3*
Algebra	1
Geometry	1
Physics	1

Elective Units

(Choose a minimum of 9 units)

Commercial Arithmetic .. $\frac{1}{2}$	German .....2 or 3
Economics .....1	Chemistry .....1
Government .....1	Commerce and Industry.. $\frac{1}{2}$
U. S. History .....1	Mechanical Drawing .....1
Latin .....2 or 4	Solid Geometry $\frac{1}{2}$
Ancient History .....1	Spanish .....2 or 3
European History .....1	Trigonometry $\frac{1}{2}$
French .....2 or 3	

(A total of 15 units is required)

*Four courses in English are regularly computed as *three* units for college entrance.

EVENING POLYTECHNIC SCHOOL

Candidates for this school are advised to complete the high-school course, including in it English, Algebra, Geometry, Science and Drafting.

Men of suitable age and experience, however, will be admitted with the following:

Required Units

(3 units)

English	1	Plane Geometry	1
Algebra	1		

Recommended Units

Algebra, Intermediate	1	Mechanical Drawing ½ or 1	
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SPECIAL COURSES

The Northeastern Preparatory School offers in addition to its regular college-preparatory courses several special courses which are as complete in themselves as those that require a longer time for completion. These special programs have been arranged with the idea in mind that they will help men in a very definite way to prepare themselves to occupy a good position in a chosen field. The courses follow:

COURSE T-1. This is a course especially arranged for men engaged in the trades who wish to improve their knowledge of elementary English and Mathematics, and who, in addition, wish to obtain a more complete understanding of Blueprint Reading and Mechanical Drawing. The entire course may be covered during two terms of sixteen weeks each. The subjects are:

Elementary English	Blueprint Reading
Applied Mathematics	Mechanical Drawing

COURSE T-2. This course is somewhat similar to Course T-1 but more advanced in the subject matter presented. When one has finished he should be qualified to occupy in a satisfactory manner a position as a draftsman or a position of equal grade in similar work. The subjects pursued are:

English	Blueprint Reading
Algebra	Mechanical Drawing
Plane Geometry	Estimating
Applied Mathematics	Machine Drawing

COURSE T-3. This course is of special benefit to those who wish to prepare themselves to become surveyors. The subjects offered are:

English
Algebra
Plane Geometry
Trigonometry

Mechanical Drawing
*Topographical Drawing
*Surveying

COURSE T-4. This course is of a business nature and has for its aim giving one sufficient instruction to occupy a position as an office assistant. The course consists of the following subjects:

Business English
Penmanship

Commercial Arithmetic
Bookkeeping

COURSE T-5. This is a course of special interest and value to men engaged in or contemplating entrance into the field of salesmanship. Every salesman should be able to speak correctly and clearly, as well as write clear concise English. He should also have a knowledge of the fundamentals upon which the art of salesmanship is built. The subjects to be pursued by the student selecting this course are:

English I
English II
Business English

Public Speaking
†Salesmanship

*Offered in the Northeastern Polytechnic School.

†Offered in the Northeastern School of Commerce and Finance.

Other special programs may be arranged to meet any particular need. Students who feel that they need instruction not covered by the above courses should consult the principal of the school.

Subjects of Instruction

Note: The courses of the school are arranged in "units."

A unit is ordinarily the amount of work covered in a single subject taken four or five times a week for a year in a standard day high school.

In this school a unit may be covered in each subject in two terms of sixteen weeks each. For instance, History 2a and History 2b, each being a term's work, constitute a unit in History. Each is equivalent to a half-year's work in high school. This holds for all subjects except English.

Students carry one, two or sometimes three subjects at a time. Fifteen units, properly selected (see pages 13-15), are required for graduation.

ENGLISH

The English courses are especially planned to develop broad, sound habits of thought, alert intelligence, and direct and clear expression. The instruction in literature and composition is conducted according to college methods adapted to preparatory school standards; the lecture system is employed in preference to recitation; and the mature mind accordingly finds ample material for thoughtful and progressive effort.

Among the chief topics treated are the practical elements of composition and rhetoric, the nature of style, the origin and development of the chief literary forms, and the appreciation of English classics. Fundamental principles of thoughts and expression are emphasized throughout the course; thoroughness is insisted on. Technicalities are avoided; enthusiasm, understanding, and persistence are fostered.

ENGLISH A.—This course is for those who need drill in elementary spelling, punctuation, grammar, letter-writing, and oral reading. The aim is to prepare the student for the first-year course in high school.

ENGLISH 1a, 1b.—This course is introductory to the essentials of composition, and emphasizes the practical problems in grammar, sentence structure, and clear expression. Prose classics are read both to give training in thoughtful and appreciative reading and to serve as models for the composition work. Much attention is paid to spelling.

ENGLISH 2a, 2b.—This is designed to aid the student in the study and appreciation of literature in its relation to other literary, or historical, events. Course 2a deals chronologically

with British literature. Course 2b takes up the literary masterpieces written by Americans. Much attention is paid to the best expressions of contemporary thought.

ENGLISH 3a, 3b.—This is a course in advanced composition, the purpose of which is to enable the student to express himself effectively. It insists upon clear, forceful presentation, accurate and coherent thinking, and the careful study of stimulating models. The principles of punctuation, grammar, and letter-writing are briefly reviewed. This course may follow 1ab.

ENGLISH 4a, 4b.—The purpose of this course is to aid the student in the acquiring of that appreciation of the masterpieces of literature which the college entrance examinations demand. This work is supplemented by lectures and carefully revised written reports.

ENGLISH FOR FOREIGNERS (ENGLISH F).—This is a practice course in speaking, reading, and writing, designed for foreign-born men of education who already possess some knowledge of English but who wish for greater proficiency and accuracy.

LATIN

The courses in Latin are such as to fulfill the requirements of college entrance examinations. In the first year, they aim to give a foundation in grammar which will make possible and profitable the study of Latin texts in the other years.

LATIN 1a, 1b.—This course embraces the elementary grammar, with easy translations and drills on inflections.

LATIN 2a, 2b.—Course 2 requires translations from Caesar, with frequent assignments in Latin composition. The latter involves a review of constructions and forms, and application of the rules of syntax.

LATIN 3a, 3b.—Cicero's orations against Cataline, for the Manilian Law, and for Archias are read. Grammar review and Latin compositions also are included.

LATIN 4a, 4b.—This course requires translations from Virgil's "Aeneid," and advanced Latin composition.

FRENCH

The courses in French are planned with the purpose of giving to students (1) an appreciative comprehension of French, both as literature and as a spoken language; and (2) a sufficient knowledge to fit them for advanced work in higher schools. The essentials of the grammar are mastered by continued drill and constant application. The attainment of good pronunciation receives careful attention, and from the beginning the student is trained to understand spoken French.

FRENCH 1a, 1b.—The “New Chardenal French Grammar” is used, with selected readings. Emphasis is placed on pronunciation and the acquiring of a vocabulary.

FRENCH 2a, 2b.—This course continues the study of the “New Chardenal French Grammar.” Special composition work and selected readings also are required. Students who complete both French 1 and 2 are prepared to take college entrance examinations in Elementary French.

FRENCH 3a, 3b.—The “New Chardenal French Grammar” is reviewed. Lamartine’s “Révolution Française” and selections from Maupassant, Th. de Banville, Meilhac et Halevy, and others are read. Koren’s “French Composition” affords practice in English-French translation.

FRENCH 4a, 4b.—This course embraces classic plays, and selections from Balzac and others; Victor Hugo’s “Hernani”; Rostand’s “Cyrano de Bergerac”; and critical essays on France, its people and its literature.

SPANISH

SPANISH 1a, 1b.—This elementary course covers the grammar, with correct pronunciation, ear-training, and conversation.

SPANISH 2a, 2b.—The study of grammar, and practice in conversation and composition are required.

GERMAN

The aim of the first year is to enable the student to acquire a correct pronunciation, to gain a complete mastery of fundamental grammatical forms and principles, and to get a vocabulary that will make it possible to read simple German texts intelligently.

In the second year the inflected forms and the principles of German grammar are thoroughly reviewed, the working vocabulary is constantly enlarged, and exercises, both in composition and conversation, are continued.

GERMAN 1a, 1b.—Voss' "Essentials of German," and Guerber's "Märchen und Erzählungen" are used. Emphasis is placed on pronunciation and the acquiring of a vocabulary.

GERMAN 2a, 2b.—The study of grammar is continued. Special attention is given to syntax, and selected readings are required. Students who complete German 1 and 2 are prepared to take college entrance examinations in Elementary German.

GERMAN 3a, 3b.—This course embraces Becker's "Deutsch für Ausländer"; Wildenbruch's "Das edle Blut"; Baumbach's "Die Nonna"; von Lilencron's "Anno 1870"; Keller's "Kleider machen Leute"; Heine's "Die Harzreise"; Meyer's "Das Amulett"; and German composition.

GERMAN 4a, 4b.—Schiller's "Wilhelm Tell" or "Die Jungfrau von Orleans"; Lessing's "Minna von Barnhelm"; Goethe's "Egmont" and "Hermann und Dorothea"; and critical essays on Germany, its people and its literature, are read.

HISTORY, GOVERNMENT, ECONOMICS

The aim of the department is to give a broad knowledge of vital conditions in the growth of the leading countries of the world. This includes the study, not only of important historical facts, but more especially of the progress of development in government, society, business, religion, and education. The past is studied that the present may be better understood.

HISTORY 2a, 2b.—A careful and comprehensive study is made of United States History, including not only the story of earlier times but also an analysis of events from the Civil War down to and including our own times. Special reference is made to the constitutional, political and economic development of the Nation.

HISTORY 3a, 3b.—This is a course in European History, embodying a comprehensive survey of mediæval and modern Europe, including England. A study is made of the development of the great races of to-day, particularly the Anglo-Saxon, Latin, Teutonic, and Slavonic, and the tendencies that resulted in the World War.

HISTORY 4a, 4b.—This is a course in Ancient History. The first division is devoted to the history of Greece; the second,

to that of Rome. The course emphasizes the characteristic elements of these civilizations and the contributions which they made to modern civilization.

GOVERNMENT 1a.—The forms of our local and state governments are taken up first. These are followed by a careful analysis of the Constitution of the United States, showing the relationship of the executive, legislative, and judicial branches of our National Government.

GOVERNMENT 1b.—This course begins with a study of the form and operation of the principal European governments. Comparison is later made between these governments and that of the United States.

ECONOMICS 1a, 1b.—This course comprises the outline of trade development as contained in economic history; and also a study of economic theory, including prices, values, money, banking and exchange, credit, international trade, transportation, labor and capital, public ownership, wages and profits, and kindred subjects. The field of public finance is also covered briefly, but thoroughly.

MATHEMATICS

The purpose of the courses is two-fold: (1) to make the student acquainted with such mathematical methods as are most likely to be useful in the study of other subjects and particularly in practical affairs; and (2) to give him a thorough training in such fundamental branches as shall furnish a sufficient basis for advanced mathematical studies.

ARITHMETIC A.—This is an elementary course on the four fundamental operations, factors, and simple processes in preparation for Arithmetic 1a.

ARITHMETIC 1a.—For a description, see Commercial Subjects.

ALGEBRA 1a, 1b.—The essential operations of algebra to quadratics are covered. The emphasis is on the fundamental principles.

ALGEBRA 2a.—This course completes the college entrance requirements. It is designed for students who have acquired the fundamental principles.

GEOMETRY 1a, 1b.—The five books of Plane Geometry are studied. The numerous original exercises stimulate the power to reason clearly and to derive logical proofs. Special attention is given to those who expect to take college entrance examinations.

GEOMETRY 2a.—This course comprises the standard theorems in solid and spherical geometry. Stress is laid upon numerical exercises involving mensuration of solid figures. The work is designed primarily for those who are preparing for college.

TRIGONOMETRY 1a.—This course is intended for those who wish to offer trigonometry for college entrance, or for those who intend to take up engineering.

APPLIED MATHEMATICS.—This course teaches one to apply the common mathematical truths to practical problems. A valuable course for men engaged in the trades and also for one wishing a general review of elementary mathematical truths.

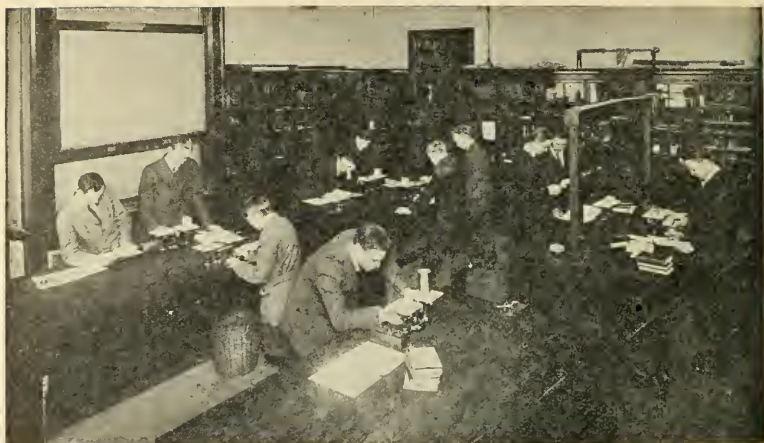
DRAWING

MECHANICAL DRAWING 1a, 1b.—The fundamentals, such as lettering, geometrical problems, orthographic projections, and development and intersection of surfaces, are covered. Much attention is given to the proper use of the various drawing instruments. A credit toward college entrance will be granted upon the completion of plates 1 to 41, inclusive, and plates 43, 49, 51, and 53, in Sampson's "Mechanical Drawing and Practical Drafting." All the work is individual and admits of progress according to the student's ability.

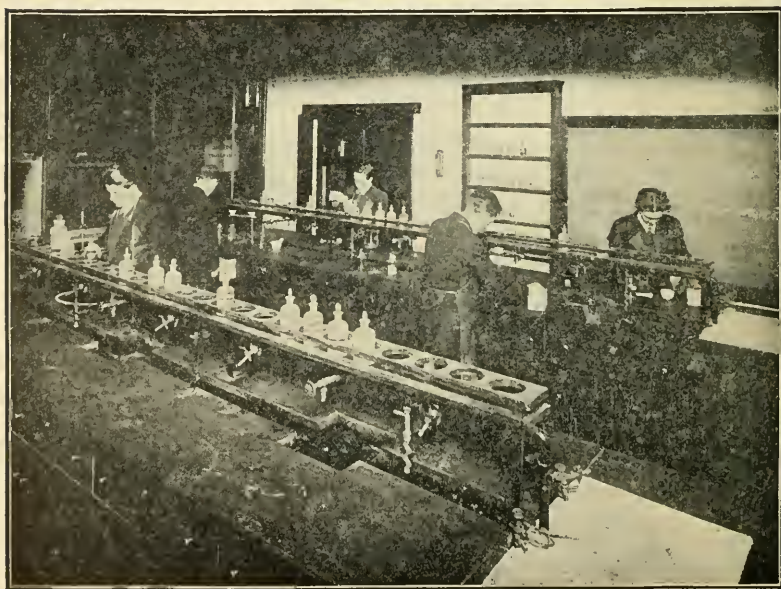
SCIENCE

PHYSICS 1a, 1b.—This course meets the college entrance requirements. Mechanics, heat, magnetism and electricity, sound and light are taken up. The course aims to encourage in the student a habit of observation, and to develop his ability to think intelligently about simple physical facts, many of which are observed in everyday life.

CHEMISTRY 1a, 1b.—The general purpose of this course is similar to that of Physics 1. The work is divided between



PHYSICS LABORATORY



CHEMISTRY LABORATORY

lecture-room discussion and demonstration of the fundamental principles and facts of inorganic chemistry, on the one hand; and, on the other, experimental work in the laboratory by the students individually. This latter is closely supervised, and the student is required to do his work neatly, observe results carefully, and endeavor to reason from these results to legitimate conclusions. He must also keep systematic records of this work, as directed. At least forty-five experiments are performed.

COMMERCE AND INDUSTRY.—A study is made of the various countries in relation to their commercial intercourse. The student is familiarized with the principal waterways, cities, products, imports, exports, etc.

COMMERCIAL SUBJECTS

ARITHMETIC 1a.—The aim of the course is to secure a combination of speed and accuracy in the essential arithmetical calculations used in business. A thorough review of elementary principles is given, followed by a detailed study of fractions, decimals, aliquot parts, percentage, interest, bank discount, commission, pay rolls, insurance, brokerage, taxes, estimating grain and lumber supplies, and other practical phases.

BOOKKEEPING 1a.—This is a course intended to train the student in the art of properly recording the simpler transactions of business according to the elementary principles of accountancy. The books used are the cash book, the purchases book, the sales book, the journal, and the ledger. After the first month the check book and bank book are introduced. The trading and profit and loss statements and statements of resources and liabilities are made as simple as possible and instructions are given with great fullness and detail.

BOOKKEEPING 1b.—This course trains the student to keep a set of books illustrating a wholesale business. At the beginning the firm consists of two persons; later additional partners are admitted. The business of a wholesale grocery house is represented, but the methods and practices set forth will apply to a wholesale or jobbing business in almost any

other line, such as dry goods, notions, clothing, boots and shoes, hats and caps, men's furnishings, millinery, etc. The purpose of the course is to qualify the student thoroughly to keep any set of commercial accounts.

COMMERCIAL LAW 1a.—A course in the elements of business law, covering such subjects as contracts, agency, sales, bailment, negotiable instruments, partnerships and corporations. The intent of the course is only to help one to keep out of pitfalls, and to know when professional services are necessary.

PENMANSHIP.—Exercises in plain business writing are required. Legibility and rapidity are emphasized throughout the course.

PUBLIC SPEAKING.—This class meets one night each week. Its purpose is to teach men how to speak effectively either when in conversation with others or in public. Students taking this course learn to talk coherently and convincingly.

NOTE

The courses described in the foregoing form the entire curriculum of the School. Most of these courses are offered every term; a few in alternate terms or every third term. An announcement is made in advance of each registration period of the courses scheduled for the following term, together with the day and hour at which each class will meet. Any secondary school subject, however, will be offered if six or more men register for it, even if it is not listed on the announcement or in this catalogue.

General Information

School Year

The school year is divided into three terms of sixteen weeks each. The fall term includes the period from September to January, the spring term from January to May, and the summer term from May to September.

The work is so conducted that in any two terms the student may complete a full year of high school work in any subject. By attending full calendar years, a four-year high school course can be completed in from three to five years, according to the number of subjects carried by the student.

Beginning classes are offered each term in a variety of subjects. It is possible for a student to enter the School at the beginning of any term, and to select courses suited to his individual advancement. Several half-courses are also offered each term.

Sessions

The school sessions are held on week-day evenings, excepting Saturday, from 7 to 10 o'clock. A student's schedule may include 1, 2, or 3 evenings a week, depending on his selection. *As a rule, subjects are scheduled for two evenings a week.* It has been found that because the students are mature, and in earnest, they can do the work of a course in fewer recitation periods than customary in a day high school; therefore, classroom work is concentrated and intensive. It must be remembered, however, that the major part of the work is done outside the classroom.

Examinations

Examinations are held in all subjects at the close of each term. If a student pursues a course part of the term and then drops it, no record of his standing in that course is kept at the office. Students are advised, therefore, to pursue courses in full and take all examinations, since later, for college entrance or for business, they may need an official rating. While the scholarship of students is determined largely by

means of examinations, yet regularity of attendance and faithful performance of required work are considered essential.

Term examinations are modeled after college examinations.

Attendance upon at least 75 per cent of the classes is required for admission to the examinations.

The passing mark is D—(60 per cent).

A student marked E (conditioned) may enroll in the course immediately following, upon condition that he remove his deficiency by special examination early in the next term. A fee of \$3 is required for each such examination regularly scheduled.

Vocational and Educational Guidance

It is the intent of the School to advise carefully all its students, so that the subjects selected for study shall be of most benefit to the student, in relation to his ultimate vocational aim, or to his more immediate educational purpose. The School realizes that some men come to it to get help in bettering their business positions, others to broaden their general education, and still others to be directed to a college or technical school. To each is given advice which will best meet his educational need.

Credit from Other Schools

Students who have begun their high school work in other approved institutions may obtain credit for that work toward the diploma of this school by presenting a certified transcript of record from the school previously attended.

Admission to College

A few colleges will admit students on the diploma from this school. A large number of colleges will accept a special certificate from this school. A few colleges (notably Harvard, Yale, and the Massachusetts Institute of Technology) require certain examinations from all candidates, and this school prepares for those examinations.

To obtain a certificate, a grade of 80 per cent is required in each subject.

Special Students

Some of our students do not expect to enter higher institutions of learning. To these the School offers special combinations of subjects which will benefit them in the work in which they are engaged during the day.

Special Summer Courses

Several intensive courses carrying a full unit credit each are given each summer in Boston and Worcester, particularly for the benefit of students in college or preparing for college who have admission requirements to work off.

Scholarships

As an aid to worthy men who desire an education and are unable to pay in full even our slight charges, a limited number of scholarships has been provided, which will be judiciously distributed. Application should be made to the principal of the school.

Text Books

Students buy their own books and printed outlines of courses. Students taking Mechanical Drawing must furnish their own instruments and supplies. The book store keeps on hand all books and supplies used in the School.

Library

The School has excellent facilities for study in the library and reading room of the Association, which is equipped with dictionaries, encyclopædias, and special texts for carrying on the work of the school effectively.

Tutoring

The school office is in touch with capable teachers who will give individual instruction to men who desire private lessons either for rapid emergency work or in any courses which are not on our schedule. Arrangements are made through the office.

School Gatherings

At intervals, the students of the school meet in a general assembly. Opportunity is given to hear an address by some

business or professional man and to meet other members of the school. The annual "Get-together" is held in March.

The Y. M. C. A.

The Northeastern Preparatory School is conducted by the Young Men's Christian Association and, though non-sectarian, is thoroughly Christian in character. Students are encouraged to participate in the activities of the Association, so far as is consistent with their own particular religious beliefs. However, a student should not hesitate about entering the School because of religious faith, no attempt being made to influence one to participate in activities which are contrary to the tenets of his particular religion.

Religious Activities

Students are cordially welcomed and urged to participate in all the activities of the Y. M. C. A.—it is hoped that they will feel free to do so to the largest extent possible. In connection with the various departments of each Association, an ample social and religious program is provided, so that all men should be able to find that type of activity in which they are most interested. Full information may be received on inquiry.

Students' Tickets

Half-fare tickets on the Boston Elevated Railroad may be obtained on applications issued at the school office.

The railroad systems entering Boston issue student's tickets to men under twenty-one years of age. Applications for these may be obtained at a railroad office and signed at the school office.

Gymnasium

Students in the Northeastern Preparatory School may secure privileges in the Department of Recreation and Health at a special student's rate. There are also special rates for men who wish the use of the pool and showers during the summer months only. Particulars may be obtained at the office.

Tuition Rates

The rates are made for each subject, for a single term only, so that students are charged exactly in proportion to the instruction.

Standard academic courses, with the exception of Physics and Chemistry, meeting two hours per week; \$15.00 for the first course, and \$13.00 for each in addition thereto. For payment in full upon enrollment, the rate is \$13.50 for the first course, and \$11.50 for each additional course. The rate of Chemistry and Physics courses outside of the laboratory and breakage fees is \$20.00; on a cash basis, \$18.00.

The rate for full-unit courses is \$28.00 for the first course, or \$26.00 if taken in conjunction with another subject. Cash rate: \$25.00 for the first course, or \$23.00 if taken in conjunction with another subject. Laboratory fees and deposits, as stated below, are additional in either case.

The laboratory fee for Chemistry or Physics is \$5.00 for each half course. A deposit of \$5.00 also is required for Chemistry to cover breakage, the unused portion to be returned at the close of the course.

The fee for a special examination regularly scheduled is \$3.00; for one scheduled irregularly \$5.00.

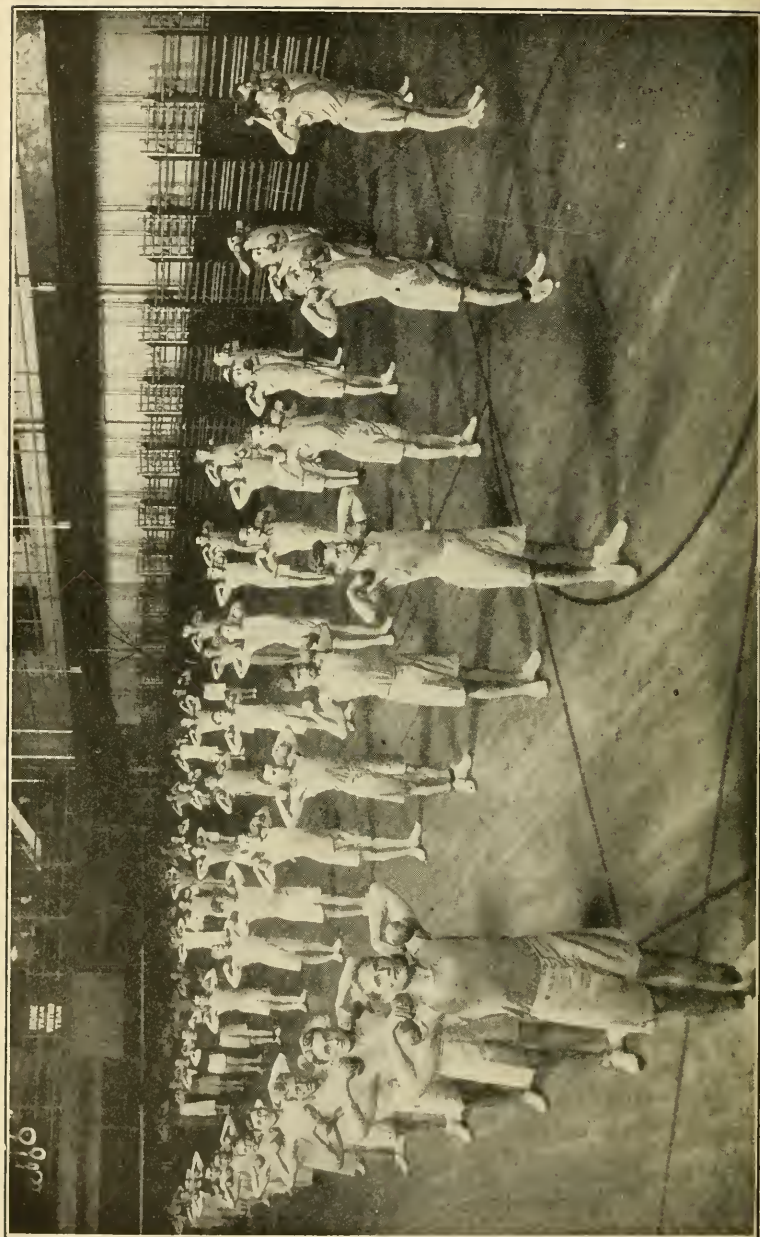
The diploma fee is \$3.00.

For rates for special classes and tutoring, apply at the office.

The tuition rates include a membership of four months in the Boston Y. M. C. A.

The *first half* of tuition is due on entrance. The second half is due November 15, March 15, or July 15, according to school term.

This catalogue becomes a part of the contract between the School and the student upon his first payment of tuition.



GYMNASIUM

Refunds

Since the School assumes the obligation of carrying the student throughout the term for which he registers, and since the School provides the instruction and accommodations on a term basis, the Committee on Refunds has ruled as follows:

- A. Applications for credits or refunds must be presented within thirty days after withdrawal from School.
- B. Credits or refunds may be authorized solely as stated below:
 - 1. Cash refunds may be granted only in cases where students are compelled to withdraw on account of personal illness. The application must be accompanied by a satisfactory certificate from a physician.
 - 2. The unused portion of the tuition paid by the applicant may be placed in suspense and used at some future time by the applicant to apply upon tuition in any school in Northeastern University, provided it is used within two years. This action is taken provided the reasons as set forth in the application meet with the approval of the Committee on Refunds.
- C. In every case of withdrawal, a registration fee of \$3.00 plus tuition to the date of last attendance will be required. Laboratory fees may not be refunded or credited.



SWIMMING POOL

NORTHEASTERN AUTOMOTIVE SCHOOL

Twenty-second Year

1924-1925

288 ST. BOTOLPH STREET, BOSTON

PUBLISHED BY THE TRUSTEES OF THE
BOSTON Y. M. C. A.

NORTHEASTERN UNIVERSITY

DAY SCHOOLS

SCHOOL OF ENGINEERING

Four-year courses in Civil, Mechanical, Electrical, Chemical, and Administrative Engineering, leading to the degrees of Bachelor of Civil, Mechanical, Electrical, Chemical and Administrative Engineering. Conducted in co-operation with engineering firms. Students earn while they learn. Work conducted at Boston.

SCHOOL OF BUSINESS ADMINISTRATION

Four-year course in Business Administration leading to the degree of Bachelor of Business Administration. Students may specialize in Industrial Management, Marketing, Finance, Accounting, and Sales Management. A two-year course leading to a Junior Certificate. Work conducted at Boston.

EVENING SCHOOLS

SCHOOL OF LAW

(Co-educational)

Four-year course leading to the degree of Bachelor of Laws. Preparation for bar examinations and practice. High scholastic standards. A much larger percentage of graduates pass bar examinations than of any other evening law school in New England. Work conducted at Boston, and in Divisions at Worcester, Springfield, and Providence.

SCHOOL OF COMMERCE AND FINANCE

(Co-educational)

Four-year courses in Professional Accounting, Marketing, and Business Administration, with specialization in banking, finance, insurance, and other fields, leading to the degrees of Bachelor and Master of Commercial Science. Special two-year courses for those desiring intensive specialization. Work conducted at Boston, and in the Divisions at Worcester, Springfield, Providence, and New Haven.

NON-COLLEGIATE SCHOOLS

EVENING POLYTECHNIC SCHOOL

Three-year courses offered in the Evening Polytechnic School lead to a diploma in Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemistry or Structural Engineering. The work offered in these courses, while not as extensive as that leading to a degree, meets standard requirements. Students are trained for positions of trust and responsibility.

NORTHEASTERN PREPARATORY SCHOOL

Courses in usual high school subjects leading to a diploma. Three sixteen-week terms each year. It is possible for students to meet college entrance requirements in from three to five years. Work conducted at Boston and in Divisions at Worcester, New Haven, and Providence.

NORTHEASTERN AUTOMOTIVE SCHOOL

Courses in all phases of the automotive industry with special instruction for owners, salesmen, mechanics, and chauffeurs. Classes are conducted both day and evening.

VOCATIONAL INSTITUTE

A diversified program of short intensive courses in Blueprint Reading, Public Speaking, Practical Trade Mathematics, Mechanical Drawing, Estimating, Civil Service, English for Educated Foreigners, etc.

For further information concerning any of the above schools, address

NORTHEASTERN UNIVERSITY

316 Huntington Avenue, Boston, Massachusetts

NORTHEASTERN AUTOMOTIVE SCHOOL

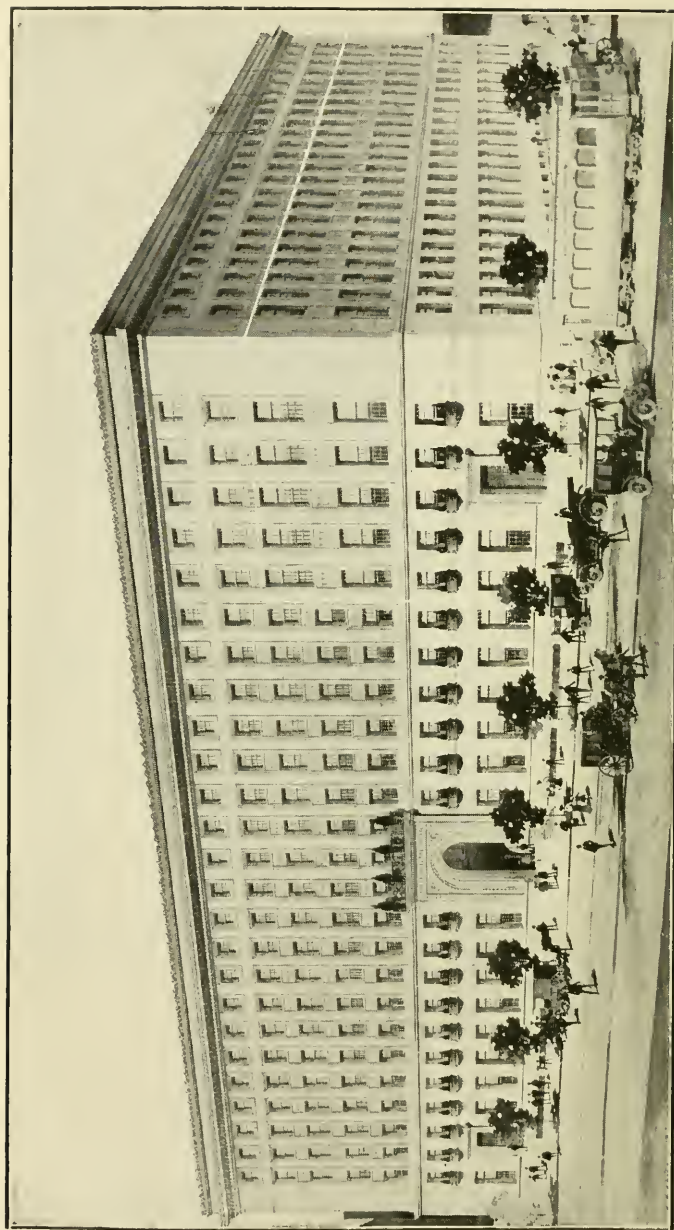
Catalog 1924-1925

*Backed by Twenty-one Years
of Successful Experience*

Northeastern Automotive School

288 St. Botolph St , Boston, Mass.

Published by the Trustees of the
Boston Young Men's Christian Association



ASSOCIATION BUILDING

Northeastern Automotive School

YEARLY CALENDAR

1924

1925

JANUARY							JULY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	31	..	..	27	28	29	30	31	..	..
..
FEBRUARY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	..	1	2	..	..	..	..	1	2	3
3	4	5	6	7	8	9	3	4	5	6	7	8	9
10	11	12	13	14	15	16	10	11	12	13	14	15	16
17	18	19	20	21	22	23	17	18	19	20	21	22	23
24	25	26	27	28	29	..	24	25	26	27	28	29	30
..	..	..	..	..	..	31	..	..	..	..	..	..	..
MARCH							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	2	3	4	5	6	1	..	1	2	3	4	5	6
7	8	9	10	11	12	13	7	8	9	10	11	12	13
14	15	16	17	18	19	20	14	15	16	17	18	19	20
21	22	23	24	25	26	27	21	22	23	24	25	26	27
28	29	30	..	..	..	..	28	29	30	..	..	..	..
31	..	..	..	..	..	..	..	..	..	..	..	..	..
APRIL							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	..	..	..	27	28	29	30	31	..	..
..
MAY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	..	1	..
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	31
..
JUNE							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	7	8	9	10	11	12	13
15	16	17	18	19	20	21	14	15	16	17	18	19	20
22	23	24	25	26	27	28	21	22	23	24	25	26	27
29	30	..	..	..	..	..	28	29	30	31	..	..	..
..
JANUARY							JULY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	1	2	3	4
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	31
..
FEBRUARY							AUGUST						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
..
..
MARCH							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	1	2	3	4	5	6
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31	..	..	..	..	29	30	31	..	..	..	..
..
APRIL							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	1	2	3	4	5	..	..	1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	..	..	..	27	28	29	30	..	..	..
..
MAY							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
..	..	..	..	1	2	3	..	..	..	..	..	1	..
4	5	6	7	8	9	10	4	5	6	7	8	9	10
11	12	13	14	15	16	17	11	12	13	14	15	16	17
18	19	20	21	22	23	24	18	19	20	21	22	23	24
25	26	27	28	29	30	31	25	26	27	28	29	30	31
..
JUNE							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	..	1	2	3	4	5	6
8	9	10	11	12	13	14	7	8	9	10	11	12	13
15	16	17	18	19	20	21	14	15	16	17	18	19	20
22	23	24	25	26	27	28	21	22	23	24	25	26	27
29	30	..	..	..	..	..	28	29	30	31	..	..	..
..

School Sessions indicated by type thus: 1, 2, 3.
Sundays and Holidays indicated by type thus: 1, 2, 3.

The Automotive School is in continuous session—day and evening—throughout the year with the exception of legal holidays and a two-weeks' vacation in August. The courses are so arranged that new students may enroll every third Monday for day classes and every sixth Monday for evening classes.

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FACULTY

HOWARD P. LEFAVOUR <i>Principal</i>	18 Beckford St., Beverly
CHARLES L. PIERCE <i>Registrar</i>	260 Massachusetts Ave., Arlington

INSTRUCTORS

ROBERT J. ARMSTRONG <i>Driving</i>	94 St. Botolph St., Boston
JOHN B. BALLARD <i>Principles of Automobile Repairing</i>	46 Forsyth St., Boston
LEWIS A. CHESLEY <i>Starting, Lighting and Ignition</i>	2 Sherman St., Cambridge
MALCOLM H. CLIFFORD <i>Starting, Lighting and Ignition</i>	232 Chase Ave., East Lexington
WILLIAM B. COWEN <i>Driving</i>	Russ St., Randolph
HARRY F. DRAKE <i>Starting, Lighting and Ignition</i>	26 Hemenway St., Boston
JAMES H. GOODRICH <i>Advanced Automobile Repairing</i>	South Hamilton
CLAYTON HOWARD <i>Principles of Automobile Repairing</i>	32 Wadsworth Ave., Waltham
HOWARD P. LEFAVOUR <i>Principles of Automobile Repairing</i>	18 Beckford St., Beverly
ARNOLD R. LEIGHTON <i>Advanced Automobile Repairing</i>	78 Huntington St., Hyde Park
H. H. MAXFIELD <i>Starting, Lighting and Ignition</i>	1039 Commonwealth Ave., Boston
GEORGE A. NORTON <i>Principles of Automobile Repairing</i>	31 Auburn St., West Medford
P. H. NORTON <i>Principles of Automobile Repairing</i>	609 Boston Ave., Boston

OFFICE

E. LEOLA STROUT	19 Greene St., Somerville
ERMIN F. BUCK	4 Granite St., Salem

NORTHEASTERN AUTOMOTIVE SCHOOL

GENERAL INFORMATION

History of Northeastern University

The incorporation of Northeastern University of the Boston Young Men's Christian Association in March, 1916, marked the culmination of a notable development. The University is the realization of an ideal carefully worked out and persistently followed for many years. One of the first lines of endeavor of the Boston Young Men's Christian Association, after its establishment in 1851, was the opening of evening classes for young men. It was not, however, until 1896 that the actual foundations for the University were laid. The larger number of courses offered required a more comprehensive organization. Gradually the courses were grouped under separate schools and additional courses were offered to complete the curriculum of each school.

The School of Law, established in 1898, was incorporated in 1904 with degree granting power. Founded in 1907, the School of Commerce and Finance was authorized in 1911 to confer the degrees of Bachelor and Master of Commercial Science. The School of Engineering opened in 1909 and was given power in 1920 to confer the following degrees: Bachelor of Civil Engineering, Bachelor of Mechanical Engineering, Bachelor of Electrical Engineering, Bachelor of Chemical Engineering and Bachelor of Administrative Engineering. The School of Business Administration was opened in September, 1922, with the right to grant the degree of Bachelor of Commercial Science. In addition, the Evening Polytechnic School, the Huntington School for Boys, the Northeastern Preparatory School, The Department of University Extension, and the Vocational Institute are conducted under the administration of the University. In March, 1923, the University was granted general degree granting power by the Massachusetts legislature.

The Northeastern Automotive School was established in

NORTHEASTERN AUTOMOTIVE SCHOOL

1903 to meet the ever-increasing demand for automobile instruction. Courses of six to twelve weeks duration, offered either day or evening, meet the needs of owner, chauffeur, salesman, and mechanic.

OUR PURPOSE

You have doubtless, often heard it said that the only way to learn a trade is to serve time as an apprentice, to learn by actual practice, and that the only way to learn the automobile business is to get a job in a garage and work it out by hard knocks. This same idea used to prevail concerning doctors, lawyers, architects, and, in fact, all the professions; but who would now think of trusting an important case or project to a professional man who has not completed a special course of training in some well-recognized school? The practical part of the profession is very essential, but how much more valuable it is if founded upon theory. It is not enough to know that a certain operation will cause a certain effect, an expert should know why this effect is obtained.

The automobile is one of the most complicated machines in the hands of the general public today. Every part has been specialized, every wearing contact fitted to a small fraction, every adjustment properly made, not only in the unit itself but in relation to the whole machine. An improperly adjusted or poorly fitted unit may ruin the whole machine and what owner or garage-man is going to risk a five thousand dollar machine in the hands of an inexperienced man?

The garage mechanic is paid for what he can do and not for what he can teach some understudy. The garage owner's reputation rests upon his ability to put out work in an efficient, speedy and economical manner. Almost anybody can wash a car, change tires, fill with oil, gas and water, but when it comes to the finer adjustments and delicate repairing it is the expert who does the job and draws the expert's wages. If the understudy never gets a chance at these more technical jobs, how is he to learn to do them? Herein lies the function

NORTHEASTERN AUTOMOTIVE SCHOOL

of the Automotive School. It gives the student opportunity to learn the more technical jobs, phases, and elements.

The only object of our course is to teach, very definitely and concretely, the theory back of every operation and process in the modern automobile. This theory is impressed upon the mind by the use of the actual parts and sections in full operation — nothing is left to the imagination.

It is possible for a man to read law in a law office long enough to enable him to pass the bar examination; it is possible for a young man to work in an architect's office long enough to enable him to undertake the plans and specifications of a small building; it is possible for a man to learn the automobile business in a garage; but these are entirely too long and expensive methods. A little time and money spent in learning the fundamentals of the business under expert instruction will save years of time, and thousands of dollars in earning power. A course in our school is an investment, not an expense.

THE COURSES

It is perfectly natural that the oldest Automotive School in America should have evolved the best and most efficient methods of instruction. Our courses are the result of years of study and experience. Every lecture and shop lesson is covered by a printed outline, so both teacher and student know exactly the context of the day's work, and the general sequence of subjects. Written examinations are given at short intervals so we may check up on any student who is not getting all he should; special help is given those students who seem to have difficulty in grasping any phase of the subject.

THE INSTRUCTORS

Our teachers are selected from among the men who have had years of experience in their respective trades. Only men of highest character and with teaching ability backed with years of experience are found on our staff. Our policy is to

NORTHEASTERN AUTOMOTIVE SCHOOL

give definite, thorough and practical instruction, and to present the subjects in such a clear, concise manner that they can be mastered by anyone of average intelligence and willingness to learn.

NEED FOR MEN

Examine the "Want Ads" of any of our papers and you will see just what the situation is. Very rarely do you see an auto mechanic advertising for a position, whereas there are always calls for competent repair men. If you are considering the repair business read the following questions and answers, they will help you decide.

1. *Am I capable?* This is rather a personal question and one you will have to determine largely for yourself. An interview with the Principal or Registrar of the Automotive School will help you, and will place you under no obligation. Your personal adaptability, experience, ambition and preference should enter into your decision.

2. *What of the future?* Examine the following statistics prepared by the National Automobile Chamber of Commerce and see what the future holds for the thoroughly prepared man, either as mechanic, salesman, chauffeur, garage owner or service man.

Automobiles and trucks registered in 1923	15,092,177
Motor vehicles produced in 1923	4,086,997
Wholesale value of output	\$2,804,952,716
Capital invested	\$1,571,722,411
Wages and Salaries	\$ 579,002,686
Employees in Automotive Industries	3,105,350
Gasoline produced, gallons	7,555,945,143
Gasoline consumed, gallons	6,685,035,280
Tire casings produced	45,245,000

To take care of all this business after it leaves the producers, the public must depend upon the concerns as indicated below:

Dealers	43,588
Garages	50,915
Repair Shops	67,802
Charging Stations	4,202

NORTHEASTERN AUTOMOTIVE SCHOOL

RAW MATERIAL CONSUMED IN MANUFACTURING MOTOR CARS AND TRUCKS, 1923

Iron and Steel, tons	3,434,800
Per cent of total of production of iron and steel used in manufacturing cars and trucks.	10.2 %
Aluminum, pounds	91,514,000
Copper, pounds	121,049,150
Tin, tons	7,300
Lead, tons	135,349,000
Nickel, pounds	6,275,000
Leather, upholstering, square feet	60,000,000
Upholstering cloth, yards	19,036,000
Imitation Leather, square feet	166,319,000
Lumber used in manufacturing cars and trucks, feet	1,463,353,000
Glass (mostly plate glass), square feet	47,229,500
Top and Side Curtain Material, yards	30,389,000
Hair and Padding, pounds	40,870,000
Paint and Varnish, gallons	14,304,500

The Automobile Industry according to the Census of Manufacturers in 1921 ranks the third largest in the United States.

1. Slaughtering and Meat Packing	\$2,200,942,000
2. Petroleum	1,727,440,000
3. AUTOMOBILES	1,666,140,000
4. Foundry and Machine Shop Products	1,565,527,000
5. Steel Works and Rolling Mills	1,481,659,000
6. Cotton Goods	1,279,168,000
7. Bread and other Bakery Products	1,089,759,000
8. Men's Clothing	933,249,000
9. Lumber and Timber Products	902,501,000
10. Boots and Shoes	866,817,000

The Automobile Industry is not only the third largest in the world, but it is developing much more rapidly than any other. When we realize that there were only 3,700 cars in 1899, and fourteen million in 1923, we get some idea of the future of the industry.

All of these cars, tires, batteries, and accessories must be kept in condition, and it is here that the efficient repairman is greatly in demand.

The demand will increase with increased production. The successful garage man will be the one who has the reputation of being up-to-date, always ready, and capable of handling new problems. A future in the repair business depends absolutely

NORTHEASTERN AUTOMOTIVE SCHOOL

upon the man. If a man is capable, efficient, honest, and ambitious, he can set his own goal, and make of his success what he desires; the opportunity is open.

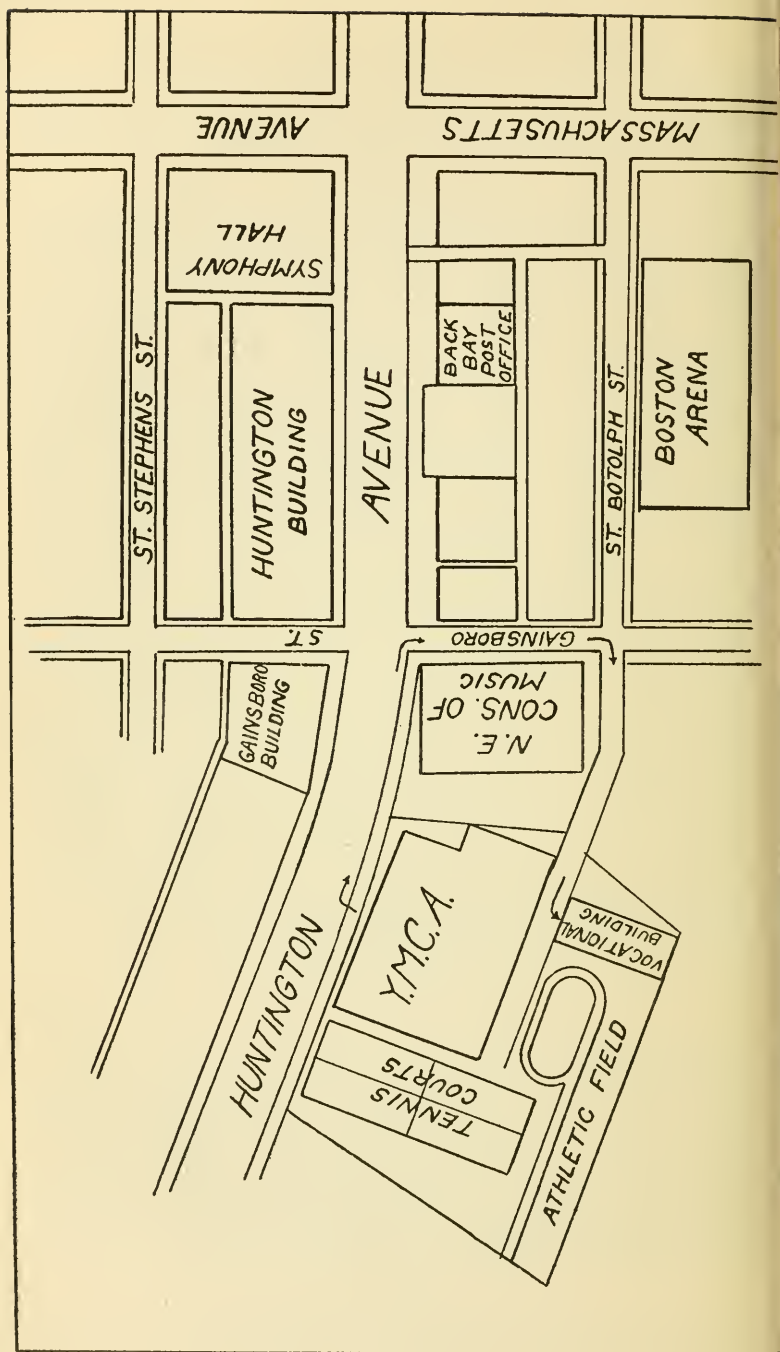
3. *What returns may I expect?* The average repairman who is working under supervision earns from \$5 to \$10 a day; but when he is able to take over the supervision of men, and is an expert in shooting troubles, his earning power is greatly increased. The man who owns his own shop can make his income equal his ability; as far as the opportunity is concerned there is no limit. If one is an auto mechanic only, he has a certain capacity; if he can handle batteries also he has a greater capacity; if he specializes in starting and lighting and ignition his field is greatly enlarged. There is a great opportunity just now, in the smaller towns, for the well-equipped, all-around repairman, who can handle any job that might come in: mechanical, electrical or otherwise. In these communities there is an opportunity to work up a remunerative and independent business.

4. *How shall I learn this business?* You naturally want to learn the business in the shortest possible time. There is only one way to do this, and do it right. You must put yourself in the hands of expert experienced teachers, whose business it is to teach you both theory and practice, who will give you abundance of experience on all makes of cars, and under the same conditions you will find when you are on the job. No garage man is going to take time, from a commercial job, to show an apprentice the details of the electric units, for instance, but this is precisely our job and business.

SCHOOL INFORMATION

Location of School

The Automotive School is in a building immediately in the rear of the Boston Young Men's Christian Association Building. The entrance is at 288 St. Botolph Street, just beyond Massachusetts Avenue and is within easy access to the various railroad stations, and the business and residential sections. A map is shown on the next page.



NORTHEASTERN AUTOMOTIVE SCHOOL

Residence

It has been found to be much more satisfactory for the student to live within easy access of Boston, than to live out twenty-five or thirty miles. The saving of time and effort more than offsets any increased expense.

There are limited accommodations at very moderate rates in the Association dormitories. These rooms may be had separately or in groups with a common reception room. The price varies from \$3.00 per week upwards. Since board costs about \$8.00 to \$10.00 per week, a student may obtain room and board for from \$12.00 per week upwards.

Residence in Boston, though not required, is advisable as it gives the student opportunity to use the school facilities outside of class hours, and to confer easily with his instructors about his work. It also gives him a greater possibility of employing his out-of-class hours for profitable employment. Moreover, residence in Boston gives the student the close connection with the activities of the school and the Association.

The school officials have no jurisdiction in the matter of dormitory assignments. Students should write the General Activities Department of the Boston Y. M. C. A. for rooms in the dormitories. The General Activities Department maintains a registry of suitable rooms in the nearby houses for the convenience of students desiring accommodations outside of the dormitories.

BOSTON

Boston still retains her reputation for being the center of learning on this continent. In the immediate vicinity are other institutions of higher learning, such as Harvard, Boston University, Tufts, Massachusetts Institute of Technology, etc., together with a dozen or more special and technical schools.

Students from out of the city will find it well worth their time to see and study these points of interest. Tourists come thousands of miles at a cost of hundreds of dollars to see what you may see for practically nothing.

NORTHEASTERN AUTOMOTIVE SCHOOL

Boston is recognized by everyone to be one of the most beautiful and interesting cities on the American continent. Boston proper has a population of over 800,000 and Greater Boston, made up of some forty cities and towns within a radius of twelve miles, has a population of 1,900,000. It was first settled in 1630, and ever since has been a leading spirit in the development of our country.

Among the points of historical interest might be mentioned: Bunker Hill Monument, marking the location of the Battle of Bunker Hill; Old North Church, from which Paul Revere observed the lantern signals; The Home of Paul Revere; Street on which the location of the Boston Massacre is marked; Old South Church; Faneuil Hall; Old State House; Boston Common; Public Gardens; Navy Yard, etc. Boston is also noted for its beautiful buildings and parks. Trinity Church on Copley Square is a beautiful example of Romanesque style of architecture. The Public Library nearby is one of the most beautiful library buildings in the world. It contains more than 1,000,000 volumes, and is open to the public every day. It was erected in 1895 at a cost of \$2,500,000. The Art Museum is always an interesting place to visit. It is a comparatively new building, erected at a cost of \$1,200,000, and as a whole is excelled only by the Metropolitan Museum of New York City.

REQUIREMENTS FOR ADMISSION

General

Students who have a good grammar school education may be admitted to the various courses in the Automotive School.

Parents and guardians are advised that it is generally for the ultimate advantage of the student not to enter under the age of sixteen years. Every applicant must be prepared to furnish references as to his character and ability, and must present evidence that he may reasonably be expected to make a success of his courses. He must be willing and able to work hard, both mentally and physically.

Provisional Acceptance

When, for any reason it is deemed advisable, the School reserves the right to place an entering student upon probation, for a period of one to twelve weeks. Whether he shall be removed from probation at the end of this time or requested to withdraw will be determined by the character of the work that he has accomplished and his conduct during this probationary period.

Admission

The courses are of from six to twelve weeks' duration and are so arranged that new students may enroll every third Monday in day classes and every sixth Monday in evening classes.

Books

Reference books are not required, but we strongly recommend that every student secure a copy of a standard textbook in each of the courses. These will be of inestimable value in future work. They range in price from \$3.00 to \$6.00.

Tools

Practically all tools are furnished free of charge by the school, but none of those used for the special ignition and repair courses. In these courses each student is required to purchase a standard set of tools, which we are able to furnish for about \$15.00. Each student is furnished a locker in which all tools, supplies, and clothing are kept.

NORTHEASTERN AUTOMOTIVE SCHOOL

SCHEDULE OF COURSES—TUITION FEES

	DAY				EVENING			
	Hours	Days	Weeks	Cost	Hours	Days	Weeks	Cost
I. Principles of Automobile Repairing .	6	5	6	\$50.00	2	3	12	\$50.00
II. Advanced Automobile Repairing .	6	5	6	\$50.00	2	3	12	\$50.00
III. Starting, Lighting and Ignition	6	5	6	\$50.00	2	3	12	\$50.00
IV. Automobile Driving ...	By Appointment			\$30.00	By Appointment			\$30.00

The above cash prices include membership in the Y. M. C. A. for the duration of the course, and are payable at time of registration. **Refunds are made only in case of personal illness.**

Payments on Installments

The prices given in the table above are for cash payments. Students who do not wish to pay the entire tuition fee in advance may pay in three installments, in which case the tuition per course will be \$55.00.

Day students must pay \$25.00 upon starting a course, \$15.00 at the beginning of the third week and \$15.00 at the beginning of the fifth week. Evening students are required to pay \$25.00 at the beginning of the course, \$15.00 at the beginning of the third week and \$15.00 at the beginning of the sixth week.

SYNOPSIS OF COURSES

PRINCIPLES OF AUTOMOBILE REPAIRING

This is a six-weeks day course or a twelve weeks evening course for the professional chauffeur, salesman, or owner who wishes more than an ordinary knowledge of the main points of a car. This course gives a thorough knowledge of every part of an automobile and gives it in detail.

The following subjects are covered:

Utilization of Heat of Combustion

Topics covered are: Use of gasoline as a fuel, theory of explosion, utilization of heat created by combustion. Compression testing, valve grinding, an intimate study of the parts and their relationship to each other. The operative principles involved in the modern automobile engine are studied in the laboratories.

Engine Principles

A study of the principles of operation is made of two-cycle and four-cycle engines. Tests are made on engines of the two four, six, eight and twelve cylinder types. Special attention is given to sleeve-valve motors by means of cut away models and running engines. Several experiments are made in valve timing of four, six, and eight cylinder engines together with an exhaustive study of the sleeve-valve mechanism and crank case construction.

Dismounting and Rebuilding Principles

Correct methods of systematic dissembling of the modern automobile mechanism are worked out by every student. The storage and recording, replacement and refitting of engine parts are carefully studied. Each student is required to refit, scrape and adjust connecting rod and main bearings, fit and install new piston rings making correct allowances for expansion under heat. The cutting and fitting of the common

NORTHEASTERN AUTOMOTIVE SCHOOL

types of gaskets to insure tight joints in water, oil, and gasoline are thoroughly taught.

Cooling and Oiling Systems

The construction, operation and repair of the thermo syphon, pump and air cooling methods are studied regarding their relative efficiency. A comparative study of automobile oils and lubricants is made with a view of determining which type is best suited for the different parts of the automobile. The distribution of the oil to the various parts of the engine is followed up. A study is made of the non-return splash, circulating splash and full force feed systems. The results of too much and insufficient oil are demonstrated together with the methods of removing excess carbon deposits.

Fuel Systems

The air pressure, gravity and vacuum systems of gasoline supply are operated under actual and test conditions. The adjustment and repair of these systems are fully covered. Every commonly used carburetor is disassembled, studied and adjusted, generally under actual working conditions.

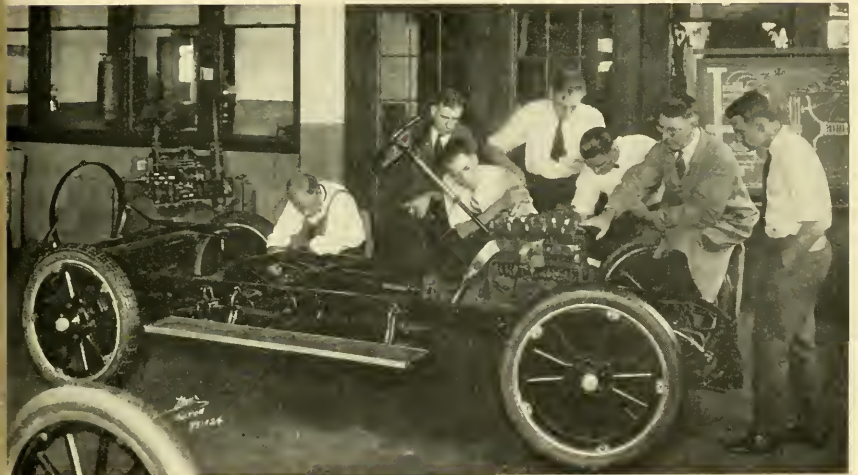
Ignition Systems

The student thoroughly masters the principles of electrical circuits paying particular attention to direct currents. The underlying principles of all ignition systems including storage batteries are fully covered. The application of Ohm's Law to the ignition circuits is studied. Electromagnetic induction, transformers, circuit breakers, distributors, timers, automatic spark, advance regulators, polarity switches and resistance units in all phases of operation are mastered by students.

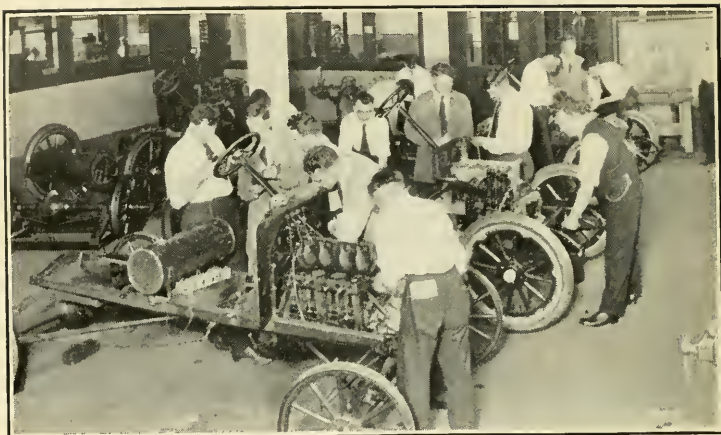
In connection with this subject, laboratory experiments are made upon Delco, Remy, Ford, Atwater Kent (both open and closed circuits) and Connecticut ignition systems. The student is thoroughly trained to locate and remedy ignition troubles through actual practice. Students are required to



AUTOMOTIVE BUILDING



PERSONAL SUPERVISION FROM THE START



SOME OF THE SECTIONED EQUIPMENT
"Equipment Counts"



THE "WHY" OF THE CARBURETOR
"Instruction that Counts"

completely rewire and put in correct running condition entire ignition systems.

Storage battery construction, operation, charging and maintenance is thoroughly covered, and its relationship to other parts of the electric system is fully shown.

Ignition by means of magneto is studied. Experiments are made upon units of the Ford, Dixie, Bosch and Eisemann types. Studies are made of timing, care and adjustment of four and six cylinder types of magnetos. The application of magneto ignition to trucks as well as pleasure cars is covered.

Lighting and Starting Systems

Single and double unit as well as one and two wire systems of the six and twelve volt types are used by our students for study. After mastering the theory upon which these systems operate, laboratory work is conducted upon Delco, Remy, Gray and Davis, Auto-Lite, Wagner, North East, Bijur and Westinghouse units.

As far as appears advisable the experimental work is carried on under actual working conditions. Adjusting headlights to conform to legal requirements is fully shown. The study of electrical systems is greatly facilitated by a generous use of charts, photographs and diagrams. The student is trained to quickly locate and remedy such electrical troubles as would come within the range of the general garage mechanic.

Power Transmission and Steering Mechanism

The operation, construction, advantages and disadvantages of the cone, dry disk and wet disk clutches are studied in detail. Adjustments, care and repair of the common types of clutches are demonstrated in the laboratory. The various types of sliding gear transmission, Kelsey Friction Drive Transmission and the Ford Planetary Transmission are all studied in detail both as to construction, operation, care and repair. The different methods of controlling gears under various operating conditions are given special attention with emphasis upon means of braking a car through them in emergencies.

Universal joints of metal and fibre are studied and their relative advantages and disadvantages discussed. The various methods of final drive such as center shaft, double chain and worm are intensively studied and results of different gear ratios upon the various parts of driving mechanism observed. The differential gears of various types are disassembled and reassembled in the laboratory, after their construction and operation have been thoroughly dealt with in the lecture room. Every student thereby has the opportunity to see for himself the results of certain forms of driving, its strong and weak points, and consequently obtains many ideas on how to avoid expensive mistakes.

The different types of rear axles are studied exhaustively so that the student should be fully capable of taking down, repairing and reassembling any rear axle assembly made. Steering mechanism of the worm and gear, worm and sector, and split nut types are studied in reference to the construction, operation and care. Vulcanizing is taught all students before the completion of their course.

STARTING, LIGHTING AND IGNITION COURSE

The demand for the skilled automotive electrician and the great opportunities open for large numbers of properly trained men in this field have only been realized during the past few years by the public. Heretofore, the garage mechanic had to do his own part of the automobile repairing as well as the electrical work required on the automobile. However, with the more recent progressive achievements made in automotive ignition, lighting and starting, the electrical work on gasoline motor propelled cars is of such magnitude as to provide steady employment to vast numbers of men in this one line. A person intending to follow automotive electrical work, in order to make a successful beginning, must properly prepare himself. The training necessary should include the theory and principles of the gasoline engine, the theory of the fundamental principles of electricity, an understanding of the principles of mechanics, the construction of all the various electrical units, the electrical wiring and connections of all the systems in popular use and the application of these branches of knowledge.

Our course of study of automotive electricity is based on the knowledge and training expected of the electrical worker in the service station. By presenting the subjects in a clear and concise manner with the aid of up-to-date laboratory equipment, new apparatus, special testing instruments, charts, lectures and instructors with years of teaching experience in this work, the students are enabled to readily understand the work, even in its advanced phases. The student is then given practical work in the actual dismantling of units, testing and repairing. The course of study is comprehensive in all details, covering lectures and practical instruction. The student individually works out problems on the construction, principles, actions, disassembling, assembling, faults, locating, diagnosing and remedying troubles, overhauling, wiring and the procedure in complete rewiring of electrical systems.

NORTHEASTERN AUTOMOTIVE SCHOOL

The electrical department has a laboratory of its own and the lectures are held in one of the special rooms devoted to lecture work. The classes are divided into divisions, limiting the size of each class to such a reasonable number of men that every student can work to the very best advantage and thereby obtain the most efficient results.

The graduate student will find that upon the completion of the course the demand for his services will be large in city and town alike. Where the service stations formerly sent their electrical work out to a shop that specialized in ignition, lighting and starting, these service stations now are anxious to use electrical work on a car as one of the means of drawing more business to them; hence the need for students to excel in this line of work and the need of employing men fully capable of undertaking such tasks in an experienced and thoroughly workmanlike manner. The theory of electricity, as well as the repairing of the units mechanically, is necessary to successfully locate and repair electrical troubles in the most satisfactory manner and in the shortest space of time. The time a student spends in this course will be well repaid. The average student completes our day course in six weeks. For a man to acquire equal learning by simply attempting to do the work in a commercial shop calling for the constant supervision of a foreman, with its consequently smaller salary as a result, would be a task consuming a number of years.

The working conditions of the electrical specialist are pleasant. The work is comparatively light and clean and calls for most careful attention and painstaking workmanship. Steady employment may be found throughout all the seasons of the year. The wages paid the automotive electrician are excellent and the demand for the automotive electrician is always enlarging. The highest grade of mechanics enter this field knowing that it provides for advancement and insures a successful future. The work taken up in the Automotive Starting, Lighting and Ignition Course is outlined briefly as follows:

NORTHEASTERN AUTOMOTIVE SCHOOL

Elementary Electricity

A study is made of elementary electricity, methods of generating, of conducting and connecting up electrical units and systems. The principles of the gasoline engine are studied in the lecture room and in the special gasoline engine laboratory where the engines are in actual operation. The principles of mechanics are taken up in both the lecture and laboratory class-rooms and the different mechanical and electrical terms are discussed.

Problems and Calculations

Worth-while consideration is given to such topics as the electrical units of measurements and electrical measurements, including thorough study of the different terms used in electrical work both in the conducting of current and the measurements of electrical pressure, current flow, electrical measuring instruments and the different subjects in connection with these topics. The topical outline follows: Direct and alternating currents, potential, current-resistance, conductors, insulators, terminals, switches, volt, ampere, Ohm, coulomb, watt, fall of potential, hydraulic analogy, terminal voltage, grounds, voltmeter, ammeter, wattmeter, resistance and line loss, short circuits, rheostat, voltage drop, ampere hour, specific conductivity, power unit, candlepower, conductance, and polarity.

A study is made in detail of resistances and Ohm's Law, simple circuits, series and parallel circuits. The student must qualify for success in the testing of work as follows: simple circuits, resistance coils, series and parallel circuits, one and two wire systems, voltage and amperage tests, effect of electric current flow, polarity of the circuit, voltage drop, calculating wire sizes, and resistance units and devices.

Storage Batteries

The theory of the primary and secondary or storage batteries, covering in detail the construction, actions and results after the assembling of the batteries and the connecting into their working circuits is taken up. The accompanying is a

brief outline of the subject matter covered: Electrolyte, plate, element, hydrometer, dry cell, storage battery, charging equipment, specific gravity, care of storage batteries, testing storage batteries and storage battery capacity, sulphation, repairing and replacing batteries, emergency repairs to battery, adding distilled water, repairing terminals, heavy discharge tests, low batteries, charging battery from outside source, battery troubles, voltmeter tests, cadmium tests and repairing storage batteries.

If the student so desires he may buy the parts and build in the laboratory a new battery to be used for any purpose he may desire. He will be required to do his own lead burning, and, in fact, everything in connection with its being put into service.

Magnetism

Magnetism is gone into intensively, dealing first with the fundamental principles, actions and laws. Time is devoted to experiments in connection with this subject to bring about a clear understanding of problems and their application, showing the relationship of current flow to magnetism and vice versa, dealing with magnets, magnetism, law of magnets, polarity of magnets, magnetic circuit, bar, bell and U shape magnets, permanent magnet, magnetic field, lines of force, permeability, retentivity, magnetic materials, recharging magnets and the magnetic compass.

Electromagnetism is taken up to familiarize the students with the theory and practice involved in obtaining magnetism of varying strengths, difference between permanent and temporary magnets, accumulative and differential action, solenoids, compass and hand rules, polarity of electromagnets, magnetic fields, etc.

Electromagnetic Induction

Problems for practice are given to the students in electromagnetic induction, such as induced pressures, self and mutual induction, strength of induced pressures, means of regulating induced pressures and measurements of induced pressures and currents.

NORTHEASTERN AUTOMOTIVE SCHOOL

Automatic Cutouts

The study of automatic cutouts will be given to show the action of the cutout or relay, voltage windings, tracing cutout circuits, testing of cutouts, adjustments, cutout or relay troubles, points of care and testing for defective cutouts.

Generators and Field Windings

Continuation of induction principles will be taken up in the theory and practice of generator work dealing with the construction, types of generators, field windings, brushes, brush positions, brush spring tension, generator insulations, field excitation, field fuses, repairing generators, testing field and armature windings, replacing of the parts of the units, internal connections of the units and rewiring of the generator systems.

Current Regulation

Fundamentals involved in generator output, voltage, and current regulation are thoroughly discussed in the lecture room and the laboratory. Special emphasis is placed on such topics as inherent regulation, reverse series, third brush, constant current, constant voltage, vibrating relay, thermostat control, mechanical and independent control regulation, regulator adjustment and the care of regulators. The students make their own tests on the different units, among which are the following: Atwater Kent, Auto-lite, Bijur, Bosch, Delco, Dyneto, Gray and Davis, North East, Remy, Simms-Huff, Splitdorf, Wagner, and Westinghouse.

Armatures and Armature Windings

A thorough study of armatures and armature windings in automotive use is made by the students, consisting of armature construction, data on armature windings, testing armatures, locating open or short circuited or grounded armature coils, lap and wave windings, laminations, commutators and commutation, turning down commutators, undercutting mica, soldering armature leads, insulations, wedges, replacing

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armature bearings and points of care to use in replacing spacer and oil retainer washers.

Starting Motors

The operation of starting motors and starting motor circuits are studied and practical tests are made to acquaint the students with the construction, action, and requirements of the different parts and various phases of starting motor principles. Windings, armatures, brushes, switches, cables, cable terminals, bearings, alignment, installing, repairing, types of starting motor drives, torque tests, counter-electro-motive force, gear ratios and lubrication are also taken up.

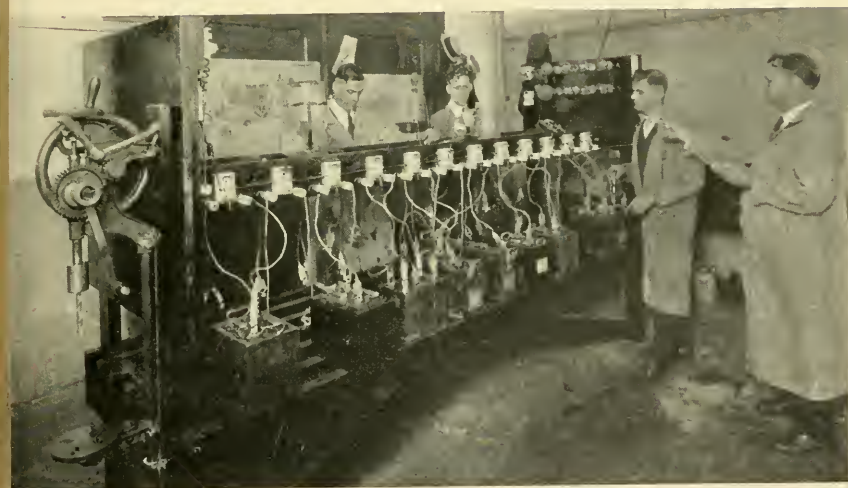
Motor-generators are studied to show their application to the automobile, their electrical connections, internal and external, terminal insulations, windings, regulation, current consumption while a motor and current delivered while a generator. The students are required to take test bench readings, to disassemble, test, assemble and make final readings of the efficiency of the units. Students also discuss motor-generator troubles, their location and repair.

The subject of motor and engine connections consists of the construction, action, care and repair of the following units and parts: over-running roller clutch, double over-running roller clutch, friction clutch, direct coupled, belt, chain and friction drive; non-automatic pinion shift, automatic pinion shift and electro-magnetic pinion and bendix drives. The students are also taught the purpose, requirement and location of the different units and parts.

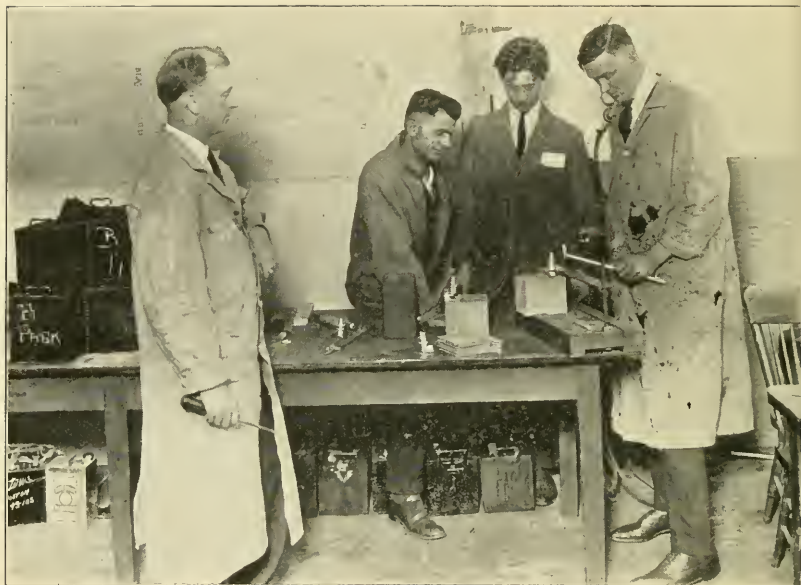
Lectures and laboratory work are given dealing with the magneto and its relations to automotive ignition, studying low and high tension magnetos, the construction, principles, actions, care, troubles, tests, wiring, connections, drives, installation, alignment and timing of magnetos on the automobiles. The Ford magneto, the Dual, and double spark systems are given full consideration at this time. The students are made familiar with the subjects under this topic, some of which are as follows: Berlin, Bosch, Bosch D. U., Bosch N. U.,



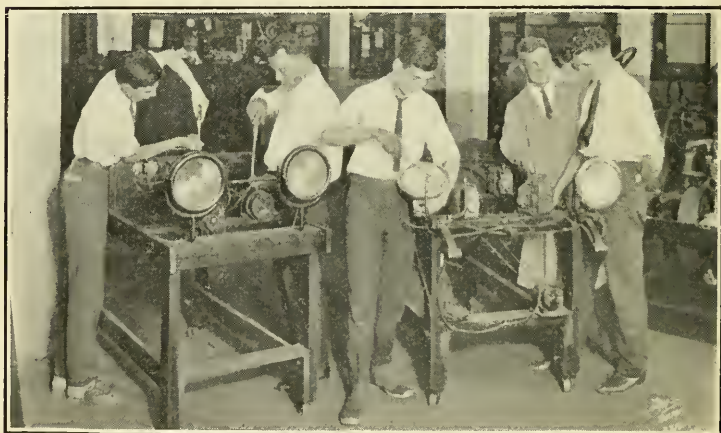
PART OF STARTING, LIGHTING, IGNITION ROOM



BUILDING BATTERIES



PRACTICAL LEAD BURNING



TRACING LIGHTING CIRCUITS

NORTHEASTERN AUTOMOTIVE SCHOOL

Dixie, Eisemann, Michigan, National, Remy and Splitdorf magnetos, magneto circuit diagrams, use of wiring diagrams, testing magnets, weak magnets, reversed polarity of magnets, testing armature windings, safety spark gap, collector ring distributors, brushes, bearings, circuit breakers, condensers, recharging magnets, applications of the numerous tests for the different parts of the magneto, overhauling, repairing and the replacement of defective, worn or broken parts of units.

A continuation of automotive ignition is made in the study of battery ignition, considering the different systems, such as Atwater Kent, Bosch, Connecticut, Delco, Ford, North East, and Remy. Also the principles of low and high tension systems are taken up and studies made of the following: jump spark vibrator and master vibrator coils, open and closed circuit type ignition systems, primary and secondary windings, timers, distributors, different type coils and systems, fuses, resistance units, thermostat automatic switches, polarity switches; ignition system for four, six, eight and twelve cylinder engines; setting distributor rotor, timing of battery ignitions, spark advance, condenser construction and action, testing condenser, testing coils; the care, repairing, rewiring and installing battery ignition systems are all thoroughly studied.

The operation of spark control embraces such subjects as set spark, manual spark control, automatic and semi-automatic spark advance or control. The following features are dealt with in detail: timing of ignitions, distributors, setting of interrupter cam, firing orders of engines, wiring distributor to firing order of engine; care, lubrication, testing, repairing and replacing of spark control systems.

An intensive survey is made of electric lamps and lighting systems covering such subjects as lamp filaments, lamp bases, lamp voltages, dimming devices, calculating wire sizes, explanation of wiring diagrams, fusing lighting circuits, lighting switches, junction boxes and junction blocks, protective devices, reflectors, focusing, insulating lighting wires, repairing and cleaning lighting switches, replacing lamp connectors,

NORTHEASTERN AUTOMOTIVE SCHOOL

installing new lamp bulbs, adjusting and cleaning lamps, repairing lighting wire terminals, lighting system troubles and rewiring of lighting systems.

Proper attention is given to battery charging, with discussions on the action of batteries while being charged and discharged. Methods of charging, voltages, charging rates, effects on batteries given too high or too low a charging rate while in the car or on the charging bench, results of a battery not being properly charged, resistances used in battery charging, use of voltmeter and ammeter in battery charging, discharging a battery, use and connections of rectifiers, mixing of electrolyte and points of care in battery charging.

The students are taught the use of electrical instruments, the construction, calibration and connecting up of the instruments to obtain correct readings, the principles of the different types, testing, replacing and care of instruments. They are required to make the tests with the different instruments so as to become familiar with the use of the ammeter, voltmeter - millivolt and milli-ammeters, high rate discharge meter, cadmium testing meters, etc.

Electrical signals and accessories are discussed in the lecture room and laboratory and the student learns the construction, repairs and installation of electric horns, bells, buzzers and warning alarms, signals and signal indicators, spot lights electric heaters, electric vulcanizers, trouble lamps and indicators, their installation and care.

Thorough analysis of electrical tests and locating trouble is gone over with the students to show the practical procedure in the making of a test, taking up the study of diagrams and their use while testing electrical systems and the diagnosis of electrical troubles of units when installed in the car and when on the test benches. Various tests are made for locating troubles or faults in batteries, battery and magneto ignition, generators and starting motors, lighting systems and accessories, windings, brushes, commutators, cutouts, regulators, and horns.

NORTHEASTERN AUTOMOTIVE SCHOOL

ADVANCED AUTOMOBILE REPAIRING AND GARAGE MANAGEMENT

In this course the student is taught the use of the garage mechanic's tools. He is also taught to grind chisels, punches and other tools used in his work. Correct methods of chipping and filing and key fitting are demonstrated. Experience is secured in boring and threading with taps and dies, also drawing out broken drills and reamers. Experience is obtained in simple machine turning, threading, chamfering, filing and polishing. The use of the drills, shaper, and milling machine as used in work on automobile parts is studied. In this course is applied the knowledge gained in the course of Principles of Automobile Repairing.

Late model automobiles that have been wrecked or otherwise damaged are received in our repair shop. The student determines the extent of the repairs needed to fully restore the machine to perfect running condition. Sometimes this means a complete dissembling of the machine until the frame is the only part not taken to pieces. As the automobile is dissembled each part is cleaned and inspected for wear and the student is instructed what use is made of each particular part. In overhauling a rear end the student is taught how to adjust the master and pinion gears. When the bearings are damaged to such an extent that they must be replaced he carries on the work. Brakes and their adjustments are thoroughly covered by every student. Transmissions are dismantled, the gears inspected, and if worn they are replaced and the whole transmission reassembled and placed in the car. The different types of clutches are studied and all parts must be thoroughly understood by the students. The refacing of cone and disc clutches is also taken up.

A student is not only instructed in the adjustment of all the other bearings of the car but he is also given the motor upon which he is to do all the work of refitting the main crank shaft bearings, both old and new bearings, grinding valves,

NORTHEASTERN AUTOMOTIVE SCHOOL

fitting new piston rings, new wrist pin bushings, oversize wrist pins, connecting rod bearings, oversize valves, valve guides and all moving parts. He is also taught where to use gaskets and of what material to make gaskets when used for water, oil and gasoline joints. The student is taught the construction of the gear and plunger oil pump and how to keep them in repair; also the water pump.

A student in this course is continuously undergoing the actual experience of completely overhauling an automobile from radiator to tail light. At the same time study is made of each part until he understand its use and repair. Not only does he overhaul the machine but he is taught the proper way to tow a car or if beyond towing how to load the wreck so as to move it to the garage. He is taught to determine the amount of damage and the probable cost of repairs. After a machine has been repaired the students under close supervision give it a road test and tune it up to give the best results. Throughout the course stress is placed upon the systematic dissembling of the modern automobile mechanism. The storage and recording, replacement and refitting of parts are carefully studied. Special emphasis is placed upon the necessity of rapid, accurate and thorough workmanship by every student. He must be trained to assume responsibility.

NORTHEASTERN AUTOMOTIVE SCHOOL

AUTOMOBILE DRIVING COURSE

This course is offered only to students who have completed one or more other courses in the school

All our driving lessons are given on regular standard touring cars with standard shift, equipped with a double set of brake and clutch pedals to enable the instructor to take immediate control in case of emergency. Special facilities are afforded for giving instruction on Ford cars.

Each lesson is a full hour in length and is given in all conditions of traffic in order to give that self-reliance and dependability so necessary to the good driver. By the experimental method each student is taught the proper methods of starting and stopping, turning, backing, parking, and all the traffic regulations. Seven hours or about 100 miles of actual driving under expert supervision is given before the student is taken to the State Board of Examiners to get his license. No extra charge is made for the use of the car or trip to the examiners, and if the student fails in his first trial, he is given the use of the car for another trial without extra charge. Everybody driving a car in the State of Massachusetts must pass this examination and possess the regular license.

ELEMENTS OF AUTOMOTIVE ENGINEERING

*Offered upon completion of other courses,
if enrolment warrants*

This course is four weeks in duration and is designed to equip a man with such engineering knowledge as will allow him to advance into a supervisory position in the automotive field. His grasp of mathematics is strengthened by individual attention on the part of his instructors until he is prepared to carry on the mathematical work involved in the study of the principles of Automotive Engineering. Early in his course the student is taught to use and construct a wide variety of graphs and charts representing various phases of work in the automotive field.

Heat and cold in its effect upon various metals and liquids common in the automotive work is taken up in lecture and laboratory. Latent heat, freezing, vaporization, thermometry, expansion and contraction, hardening, tempering and annealing are all investigated by the student. Friction and the problem of lubrication together with methods of efficient cooling are studied.

Power transmission through levers, screws, gears, pulleys and methods of calculating the forces involved are covered by all students. Measurement of surfaces and solids in the practical application of plane and solid geometry are made. The measurement of power delivered by engines of varying types is carried on by means of prony brakes. Stresses and strains in automobile construction as well as simple methods of calculation are worked out.

Students are taught thoroughly the principles of shop sketching and the elements of mechanical drawing. Elements or machine design are also studied and each student is required to make a complete design applicable to the automotive industry.

WHAT WE STAND FOR

Our twenty years of experience has taught us what our Automotive School should stand for and what should be expected of it. We therefore assume responsibility as follows:

1. To teach thoroughly the principles of automobile construction, repair, upkeep, and operation.

2. To illustrate these principles by definite, concrete examples and demonstration on the apparatus itself.

3. To keep on hand, for student use, all types of necessary equipment to illustrate principles of construction and operation of internal combustion engines, chassis, oiling and cooling systems, starting and lighting systems, clutches, transmissions, differentials, etc.

4. To give commercial experience in a real commercial garage, on real commercial jobs, such as the student will be called upon to do when he gets out into the world.

5. To give willing, expert instruction, by sympathetic instructors who are always ready to help.

6. To limit the enrolment in each class to a number sufficiently small to give every student the maximum opportunity to get a first-hand, personal knowledge of every phase of the work.

7. To conduct all our business dealings in a businesslike way, so the student may become accustomed to business operations in the automotive industry.

8. To be your personal advisor in any way in which we may be able to help you. We are only too glad to give vocational, personal, or business advice to our students.

9. To conduct our school on an economical basis, and to give instruction for the least amount of money consistent with efficiency.

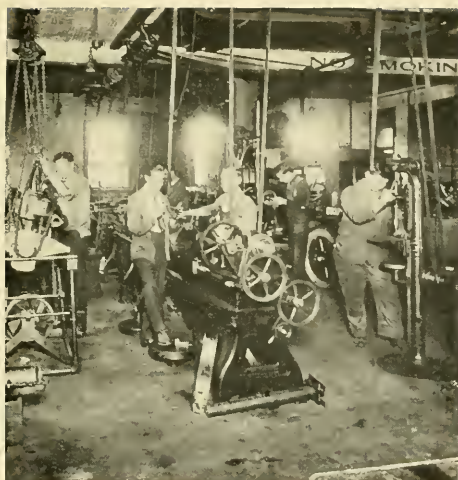
10. To make it our business to give value for every dollar received thus making every student a booster for our school.

NORTHEASTERN AUTOMOTIVE SCHOOL

The policies of this school are all drawn up by the Boston Young Men's Christian Association, which is directly responsible for its administration and conduct. The Boston Association has the goodwill of this community, which it has served for seventy years and in which it has invested \$1,250,000 in property.

The Automotive School is now in its twenty-first year of successful operation, and has over 20,000 graduates to testify to its efficiency and thoroughness. We are now registering about 1,500 students a year. There is hardly a city or town in New England but that has several of our successful graduates.

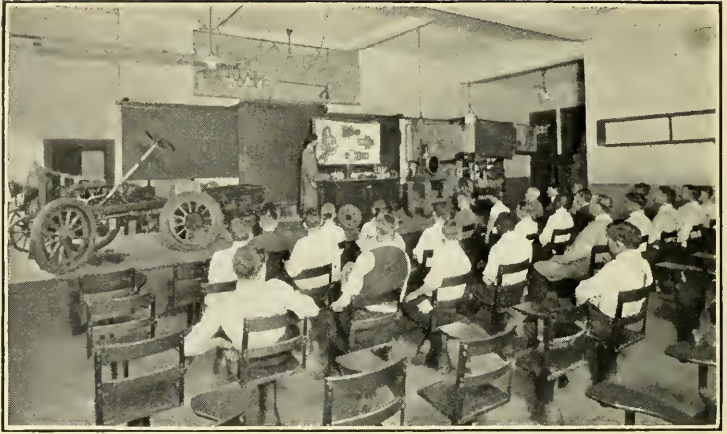
We have no stockholders, declare no dividends, pay no rent, are not in the business for money, and our policy is "Minimum fees consistent with efficiency." Our best advertising is from our satisfied graduates, and this goodwill is worth more to us than any amount of money. You will always feel that you are getting a square deal and full value for you dollar.



PRACTICAL WORK IN ONE OF OUR SHOPS



PART OF THE MACHINE SHOP



PART OF LECTURE ROOM



SHOP AND DEMONSTRATION ROOM

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Ableman, Jacob.....	Boston, Mass.
Achenden, Arthur W.....	Newton Highlands, Mass.
Adams, Charles Bradshaw.....	Jamaica Plain, Mass.
Adams, Hubert.....	Brookline, Mass.
Aiello, Massimo.....	Boston, Mass.
Aitkin, J. P.....	Somerville, Mass.
Akerley, Ralph.....	Boston, Mass.
Albringer, Miss Fanny.....	Boston, Mass.
Allen, Henry J.....	Somerville, Mass.
Allen, Howard S.....	Dorchester, Mass.
Allison, Gedwin Dandary, Jr.....	Cambridge, Mass.
Almeida, George.....	South Boston, Mass.
Ambler, Halford H.....	Winchester, Mass.
Amcock, Leo Earle.....	Braintree, Mass.
Ames, Edgar.....	Boston, Mass.
Ames, Mrs. Maude A.....	Boston, Mass.
Anderson, Lawrence.....	Somerville, Mass.
Anderson, Rudolph H.....	Brockton, Mass.
Andrews, Albert M.....	Orange, Mass.
Andrews, Ivor Ellis.....	Princeton, Maine
Andrews, Milton F.....	Orange, Mass.
Angelo, Tony John.....	Waverley, Mass.
Annis, Donald.....	St. Andrews, N. B., Canada
Archer, Edwin W.....	Charlestown, Mass.
Arey, Hugh Kenneth.....	Vinalhaven, Maine
Armstrong, Jack C.....	Revere, Mass.
Arnold, Miss Sarah E.....	Boston, Mass.
Asimacopolos, Christos.....	Boston, Mass.
Atkins, S. A.....	Winthrop, Mass.
Averill, Henry C.....	Portland, Maine
Ayers, Frank H.....	Somerville, Mass.
Babbitt, Mrs. Eunice.....	Brookline, Mass.
Bacon, Earle Wynford.....	Brockton, Mass.
Bacon, Raymond W.....	Malden, Mass.
Badger, Arthur C.....	Boston, Mass.
Bagley, David.....	Providence, R. I.
Bailey, John W.....	Arlington, Mass.
Baker, William E.....	Charlestown, Mass.
Ballard, John B.....	Boston, Mass.
Bamforth, Coral.....	Brunswick, Maine
Bannin, Patrick J.....	E. Milton, Mass.
Barker, Alfred L.....	Boston, Mass.
Barkovitz, David.....	Roxbury, Mass.
Barnes, David.....	Boston, Mass.
Barnes, Miss Mary E.....	Waltham, Mass.
Barnes, Patrick J.....	Roxbury, Mass.
Barnes, Stephen M.....	Boston, Mass.
Barrett, George.....	So. Boston, Mass.
Bates, Arthur Raymond.....	Lynn, Mass.
Bates, Bryce H.....	Egypt, Mass.
Baxter, Russell H.....	Somerville, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Bay, Ignas	Boston, Mass.
Bean, Cecil	Hyde Park, Mass.
Bean, Homer G.	Dorchester, Mass.
Bean, Joseph V.	Stoneham, Mass.
Bean, Malcom R.	Boston, Mass.
Becker, Philip	Roxbury, Mass.
Bell, Gordon Sargent	Manchester, Mass.
Bemis, Frederick	West Roxbury, Mass.
Bemis, Warren Everett	Gleasondale, Mass.
Bennett, John	Melrose, Mass.
Bennett, William H.	Roxbury, Mass.
Benson, Fritz G.	Boston, Mass.
Benson, James J.	Charlestown, Mass.
Benson, John C.	Somerville, Mass.
Bent, Alfred M.	Winthrop, Mass.
Bent, Lawrence W.	Concord Junction, Mass.
Bernesani, G.	Roslindale, Mass.
Bradford, William H.	Boston, Mass.
Bradley, Miss Alice	Hyde Park, Mass.
Bradley, Prentiss	Arlington, Mass.
Brady, Mrs. J. J.	Brookline, Mass.
Brannelly, James	Jamaica Plain, Mass.
Bray, Winthrop E.	Berlin, Mass.
Brennan, George F.	Belmont, Mass.
Bresnihan, Thomas B.	Dorchester, Mass.
Brewer, David L.	Cambridge, Mass.
Brewer, Edward E.	Dorchester, Mass.
Bridle, George	Portsmouth, N. H.
Briggs, Harry G.	Boston, Mass.
Brison, Ernest	W. Newton, Mass.
Brodie, Thomas A.	Revere, Mass.
Bronsdon, Walter	Mattapan, Mass.
Brooks, Miss Barbara	Haverhill, Mass.
Brooks, Stillman	East Dedham, Mass.
Brow, Percy	Jamaica Plain, Mass.
Brown, Augustine	Canton, Mass.
Brown, George H.	Cambridge, Mass.
Brown, Harry	
Brown, James H.	Winter Hill, Mass.
Brown, John	Boston, Mass.
Brown, John	So. Boston, Mass.
Brown, Robert G.	Brookline, Mass.
Brown, Walter J.	Newton, Mass.
Brown, William	Roxbury, Mass.
Browne, Alfred S.	Boston, Mass.
Broyderick, Miss Levena L.	Lynn, Mass.
Bruce, Roland W.	Malden, Mass.
Bryden, Joseph E.	East Milton, Mass.
Buck, Burdette J.	Boston, Mass.
Buckley, William A.	Winthrop, Mass.
Bucknam, George W.	Dorchester, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Burachansky, Dmistro.....	Boston, Mass.
Burckess, James H.....	Waltham, Mass.
Burge, William G.....	Somerville, Mass.
Burgess, Miss Helen.....	Dorchester, Mass.
Burnham, Miss Margaret N.....	Waltham, Mass.
Burns, John J.....	Dorchester, Mass.
Burns, Oliver.....	Boston, Mass.
Butterfield, Fred C.....	Boston, Mass.
Butts, Harry W.....	Boston, Mass.
Buzun, Victor.....	Lynn, Mass.
Cabot, Follen.....	Brookline, Mass.
Cabral, George J.....	Cambridge, Mass.
Cahill, Mrs. Helen.....	Dorchester, Mass.
Calderwood, John D.....	Brookline, Mass.
Cammick, Robert.....	Somerville, Mass.
Campbell, Miss Helen T.....	E. Milton, Mass.
Cannon, Arthur P.....	Malden, Mass.
Card, William C.....	Charles River, Mass.
Carey, David William.....	Boston, Mass.
Carlo, Victor.....	Boston, Mass.
Carlson, Alfred A.....	Waltham, Mass.
Carlson, Axel.....	Norwood, Mass.
Carlson, John E.....	Roxbury, Mass.
Carmichael, Archie John.....	Jamaica Plain, Mass.
Carr, Mrs. Geo. R.....	Revere, Mass.
Carr, John.....	Salem, Mass.
Carr, Joseph.....	Roxbury, Mass.
Carter, Daniel.....	Boston, Mass.
Casey, John F.....	Lawrence, Mass.
Castro, Antonio.....	Havana, Cuba
Caulfield, Fregus J.....	Roxbury, Mass.
Sister Cecile, O.S.A.....	Boston, Mass.
Center, Clayton.....	Cambridge, Mass.
Chandler, Edward C.....	Roxbury, Mass.
Chase, Donald S.....	Cambridge, Mass.
Choy, Young Jay.....	Boston, Mass.
Christensen, Emil.....	Canton, Mass.
Christidis, George A.....	Boston, Mass.
Cirelli, Americo.....	Brockton, Mass.
Ciriack, Arthur Lewis.....	Jamaica Plain, Mass.
Claggett, Forrest S.....	Brighton, Mass.
Clapp, David C.....	Withrop, Mass.
Clark, Edson H.....	Jamaica Plain, Mass.
Clark, Ruth.....	Somerville, Mass.
Cochran, Harry Joseph.....	Easton Boston, Mass.
Coffman, Nathan.....	Quincy, Mass.
Coleman, Clarence R.....	Quincy, Mass.
Coles, John.....	Cambridge, Mass.
Collari, Louis V.....	Chelsea, Mass.
Colleary, Mary F.....	Forest Hills, Mass.
Collins, Lt. Lawrence C.....	Army Base, Boston, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Colman, Edward J.	Dorchester, Mass.
Colp, Leslie E.	Cambridge, Mass.
Compton, Fredric E.	Boston, Mass.
Connolly, Thomas F.	Boston, Mass.
Connor, Cornelius T.	Boston, Mass.
Connor, Frank	Boston, Mass.
Connors, Hiram L.	Watertown, Mass.
Constantine, Peter	Auburndale, Mass.
Conway, Patrick J.	East Boston, Mass.
Coombe, Gordon Fred.	Cambridge, Mass.
Corbett, Miss Mary	Brookline, Mass.
Corkum, Francis N.	Boston, Mass.
Corning, Newman P.	Dorchester, Mass.
Cortenovis, Albert	Arlington, Mass.
Costello, Martin	East Boston, Mass.
Cotton, Carroll	Wellesley, Mass.
Cotton, Percy Blanchard	Revere, Mass.
Coughlan, Christopher	Cambridge, Mass.
Coulter, David	Cambridge, Mass.
Coyle, Thomas	Arlington, Mass.
Coyne, Michael	Roxbury, Mass.
Crane, Samuel G.	Cambridge, Mass.
Crawford, John C.	Everett, Mass.
Creed, Arthur J.	Dorchester, Mass.
Cronin, John	Dorchester, Mass.
Crosby, Hanford T.	Hyde Park, Mass.
Cross, Edward	Arlington, Mass.
Crothers, Frederick A.	W. Medford, Mass.
Crouch, Frank	Dorchester, Mass.
Crowley, Daniel J.	Roslindale, Mass.
Cucciniello, Michael	Lexington, Mass.
Cummings, Malcolm F.	Brookline, Mass.
Cummings, Roy E.	Auburn, Maine
Cunningham, Miss Agnes B.	Auburndale, Mass.
Cunningham, Miss Helen J.	Auburndale, Mass.
Cunningham, William H.	Framingham, Mass.
Curran, Miss Anna A.	Roxbury, Mass.
Curran, Maurice	Boston, Mass.
Currie, James	Somerville, Mass.
Curry, Robert	Stoughton, Mass.
Curtin, Charles E.	East Somerville, Mass.
Curtis, Alfred P.	Boston, Mass.
Cutler, Lewis S.	Medford, Mass.
Cyr, Edgar	Boston, Mass.
Cyr, Felix	Boston, Mass.
Dagilas, Mrs. Sara F.	Brighton, Mass.
Dahl, John Bernhoff	Boston, Mass.
Dale, Charles M.	Cambridge, Mass.
Daly, Thomas	Roxbury, Mass.
Daly, Timothy	East Boston, Mass.
Damon, Edwin H.	Boston, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
D'Andreo, Emanuel	South Boston, Mass.
Danehy, John R.	Cambridge, Mass.
Davidian, Ashod	South Braintree, Mass.
Davidson, Clarence H.	Roxbury, Mass.
Davis, Andrew	Somerville, Mass.
Davis, Frank L.	Boston, Mass.
Davis, Norman P.	Saugus, Mass.
Dawson, Stanfield	Boston, Mass.
Dean, Miss Mary E.	Revere, Mass.
Degnon, Andrew T.	Boston, Mass.
DeMaggio, Silvestro J.	Boston, Mass.
DeMayo, Leonard	Everett, Mass.
Denzien, Charles H.	West Somerville, Mass.
DeRibas, Louis A.	Boston, Mass.
Desautels, Armand E.	Fall River, Mass.
DeSisto, Alvin	Chelsea, Mass.
Dethier, Jean Vincent	Jamaica Plain, Mass.
Dias, John J.	Boston, Mass.
DiBuduo, Antonio	East Boston, Mass.
DiCicca, John	East Boston, Mass.
DiDonato, Joseph	East Boston, Mass.
Dockrell, William	Boston, Mass.
Dodge, Miss Pauline	
Doe, Wilfred I.	Roxbury, Mass.
Doherty, John E.	Lynn, Mass.
Doherty, John	Charlestown, Mass.
Dolan, Charles	Boston, Mass.
Dombrowski, Roman	Newton, Mass.
Donnaruma, Guy P.	Charlestown, Mass.
Donnelly, James P.	Melrose, Mass.
Donovan, Cornelius F.	Arlington, Mass.
Donovan, Harry A.	Lawrence, Mass.
Donovan, James M.	Roslindale, Mass.
Doran, Frank A.	Boston, Mass.
Doucette, John M.	Needham, Mass.
Douglas, Horace T.	Malden, Mass.
Douzassor, Serge K.	Boston, Mass.
Dow, David M.	Newtonville, Mass.
Dow, George O.	East Boston, Mass.
Dowell, T. M.	Quincy, Mass.
Dowling, Mrs.	Jamaica Plain, Mass.
Downes, Richard	Haverhill, Mass.
Driscoll, Florence J. (Mr.)	Boston, Mass.
Driscoll, George J.	Boston, Mass.
Driscoll, John S.	Manchester, Mass.
Dube, Edward A.	Haverhill, Mass.
DuBois, Allan William	Waltham, Mass.
Duchesneau, Emery O.	Boston, Mass.
Dudley, Almont E.	Readfield Depot, Maine
Dudley, Maurice	Waite, Maine
Dudley, Richard	Newton Center, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Duffy, Richard	Boston, Mass.
Dugan, Stephen A.	So. Boston, Mass.
Dumaine, William C.	Georgetown, Mass.
Duncan, Mrs. J. C.	Woburn, Mass.
Durbin, James.	Cambridge, Mass.
Durkin, Joseph.	Newton, Mass.
Dutton, Alfred T.	Boston, Mass.
Eagan, E. W.	Brockton, Mass.
Eames, Arthur L.	East Walpole, Mass.
Ecker, Miss Katherine.	Roxbury, Mass.
Edmonds, Mrs. W. S.	
Edmunds, Alfred.	Brookline, Mass.
Eisnor, Glynn A.	Mahone Bay, Canada
Eldred, Charles L.	Boston, Mass.
Elliott, Mrs. Robena J.	Roxbury, Mass.
Ellis, Clyde.	Taunton, Mass.
Ellis, Daniel J.	Dorchester, Mass.
Elwell, Lindsay M.	Dorchester, Mass.
Emerson, Charlie.	Boston, Mass.
Emery, Francis J.	Dorchester, Mass.
Enos, Mrs. Emily.	Malden, Mass.
Evans, William T.	Boston, Mass.
Everett, Elmer H.	Everett, Mass.
Ewell, Frederick A.	Medford, Mass.
Fairbanks, Frank H.	Roxbury, Mass.
Falconer, Robert N.	Hyde Park, Mass.
Farquharson, Howard.	Cambridge, Mass.
Favor, C. A.	Brookline, Mass.
Fay, Alfred W.	Auburndale, Mass.
Fay, John.	Brookline, Mass.
Feeney, Mrs. Elizabeth H.	Roslindale, Mass.
Fell, Edward.	Boston, Mass.
Fellows, George G., Jr.	Peabody, Mass.
Ferguson, Roland S.	Lawrence, Mass.
Ferguson, Mrs. W. Alice.	Winthrop, Mass.
Ferreira, Vasco.	Cambridge, Mass.
Fiel, Miss Marjorie.	Waltham, Mass.
Fisher, Miss Marion H.	Westwood, Mass.
Fitzgerald, Edmund.	Kendall Green, Mass.
Fitzgerald, John V.	South Boston, Mass.
Fitzmaurice, Alfred G.	Somerville, Mass.
Fitzpatrick, John.	Cambridge, Mass.
Fitzsimmons, Miss A. L.	Roxbury, Mass.
Flaherty, Thomas J.	Dorchester, Mass.
Fletcher, Sidney G.	Roslindale, Mass.
Flynn, Anthony.	Roxbury, Mass.
Foiezy, Miss Frances E.	Dorchester, Mass.
Foley, Francis.	Dedham, Mass.
Foley, John Robert.	Charlestown, Mass.
Fonaroff, Shlomo.	Jamaica Plain, Mass.
Fossett, Loring H.	Bristol, Maine

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Foster, Lawrence B.	Nahant, Mass.
Foster, Miss Maude E.	Boston, Mass.
Foster, Russell Percy	Somerville, Mass.
Foster, W. A.	Boston, Mass.
Fowler, Miss Nellie L.	Newport, R. I.
Fox, Edward, Jr.	Woonsocket, R. I.
Frampton, Lionel	Boston, Mass.
Franzi, Primo C.	Quincy, Mass.
Frederick, Guy	Boston, Mass.
Freeman, Harry Dexter	Everett, Mass.
Freeman, Myles	Brockton, Mass.
Fritz, Miss Caroline	Providence, R. I.
Fry, Thomas Joseph	Cambridge, Mass.
Fuller, Paul V.	Melrose, Mass.
Funke, Miss Marie	Roxbury, Mass.
Furfari, Nunzio	Roxbury, Mass.
Galanapoulis, John	Boston, Mass.
Gallery, Thomas	Boston, Mass.
Galvin, Christy	Cambridge, Mass.
Galvin, Patrick J.	Dorchester, Mass.
Garakian, L.	Chelsea, Mass.
Gardner, C. P.	Boston, Mass.
Gardner, George W.	Medford, Mass.
Garfield, Irving A.	Waltham, Mass.
Garner, Turner F.	Cambridge, Mass.
Garrison, Miss Jessie	Roxbury, Mass.
Garvin, Anthony	So. Boston, Mass.
Gaskell, King S.	Malden, Mass.
Gately, H. H.	Medford, Mass.
Gates, Francis S.	Wollaston, Mass.
Geary, Thomas J.	Cambridge, Mass.
Gerry, Mrs. May E.	Roxbury, Mass.
Gersbach, Fred J.	Boston, Mass.
Gethin, Elinor E.	Boston, Mass.
Giarla, Pasquale	East Boston, Mass.
Gibbons, Ernest F.	Somerville, Mass.
Gibbons, Patrick F.	Lynn, Mass.
Gilchrist, Edward	Brookline, Mass.
Gilchrist, Thomas W.	Winthrop, Mass.
Gilliatt, William R.	Lynn, Mass.
Ginzberg, Miss Florence	Roxbury, Mass.
Gioiosa, Richard E.	East Milton, Mass.
Glazer, Joseph A.	Somerville, Mass.
Goddard, Mrs. A. M.	Brighton, Mass.
Goldband, Sol	Boston, Mass.
Goldman, Hyman	Mattapan, Mass.
Gonfrade, Albert	Watertown, Mass.
Good, William I.	Roslindale, Mass.
Goode, Joseph M. Jr.	Atlantic, Mass.
Goodrich, Merton	Enosburg Falls, Vt.
Goodwin, Arthur E.	Malden, Mass.

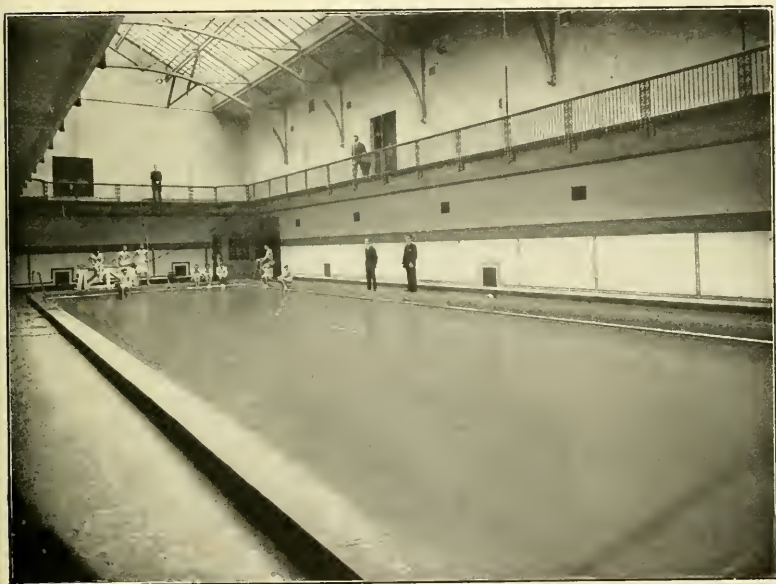
NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

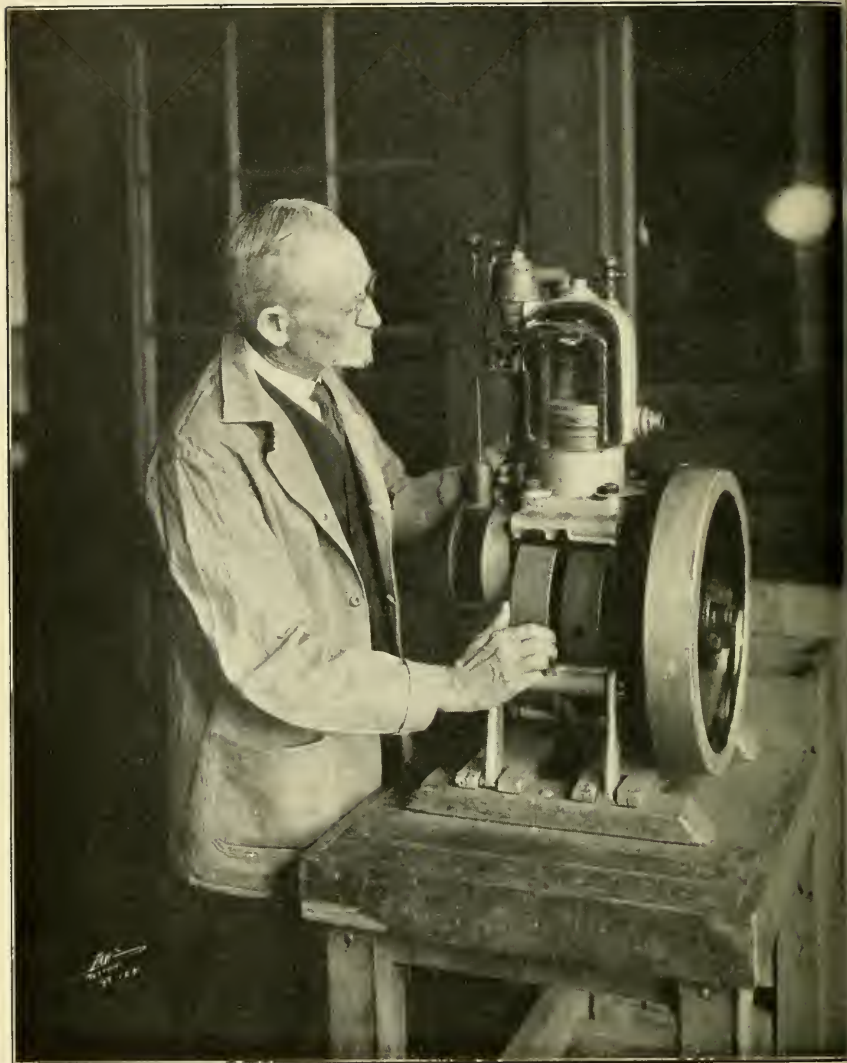
Name	Home Address
Goon, J. Hing	Boston, Mass.
Gordon, Miss Irene E.	Brookline, Mass.
Gordon, Isador	Boston, Mass.
Gordon, John W.	Malden, Mass.
Gorman, Francis E.	Waltham, Mass.
Gould, David H.	Dorchester, Mass.
Grady, Sarah	Dorchester, Mass.
Graevell, Theodore Max	Arlington, Mass.
Graham, James J.	Cambridge, Mass.
Graham, Mrs. John D.	Brookline, Mass.
Grant, Miss Elizabeth	Boston, Mass.
Graves, James E.	East Boston, Mass.
Gray, Clyde T.	Cambridge, Mass.
Gray, John	Dorchester, Mass.
Gray, William	Boston, Mass.
Graydon, William Feliz	Everett, Mass.
Green, Mrs. Julia	Roxbury, Mass.
Greenberg, Jacob	Roxbury, Mass.
Greene, Benjamin F.	Everett, Mass.
Greene, Ronald R.	Walpole, Mass.
Greenway, Adrian	Chelsea, Mass.
Griffin, Clyde Stanwood	Boston, Mass.
Griffin, Hilary	Boston, Mass.
Griffin, Lawrence	Boston, Mass.
Griffith, James	Roxbury, Mass.
Grinka, William	Lawrence, Mass.
Grovestein, Mrs. P. M.	Melrose, Mass.
Guanci, Raphael	Arlington, Mass.
Guson, M. J.	Boston, Mass.
Gustafson, John	Newton, Mass.
Gustavson, Arvid	Cambridge, Mass.
Gustavson, Karl Edwin	Boston, Mass.
Haines, Emerson W.	Nova Scotia
Haley, Mary	Waban, Mass.
Halloran, Martin	Dorchester, Mass.
Halonon, William	Peabody, Mass.
Hamilton, James	South Boston, Mass.
Hamilton, William J.	East Boston, Mass.
Hancock, Mrs. Sarah M.	Allston, Mass.
Handy, James Emerson	W. Roxbury, Mass.
Hanley, Thomas P.	Cambridge, Mass.
Hannon, Edward F.	Boston, Mass.
Hansen, Christian	Jamestown, R. I.
Hanson, Stanley	Boston, Mass.
Harrington, Patrick	Dorchester, Mass.
Harris, Clarence W.	Boston, Mass.
Harris, Ernest C.	North Adams, Mass.
Harris, Lloyd T.	Boston, Mass.
Harris, Roy F.	Everett, Mass.
Harvey, Mrs. Jennie B.	Jamaica Plain, Mass.
Harwood, Albert W.	Cambridge, Mass.



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Name	Home Address
Hastings, George H.	Boston, Mass.
Hauge, John	Boston, Mass.
Hayden, Edward R., Jr.	Dorchester, Mass.
Hayes, Clifford R.	Belmont, Mass.
Hayes, Michael	Dorchester, Mass.
Haynes, Winthrop B.	Hyde Park, Mass.
Healey, Mrs. Grace D.	Lowell, Mass.
Healy, Miss Anna L.	Roslindale, Mass.
Healy, Michael P.	Roxbury, Mass.
Hearn, George W.	Quincy, Mass.
Hefler, Harry G.	Quincy, Mass.
Hegarty, William	Dorchester, Mass.
Henderson, George	Somerville, Mass.
Hendrick, Lloyd M., Jr.	Somerville, Mass.
Henebury, Wilfred P.	Somerville, Mass.
Hennebury, Mrs. Elizabeth	East Braintree, Mass.
Hennelly, Walter	Waltham, Mass.
Hennessey, Arthur	Boston, Mass.
Henry, Harry	Boston, Mass.
Herman, William	Boston, Mass.
Hern, Cyril Clark	Stoneham, Mass.
Herron, Schuyler F.	Cambridge, Mass.
Hersey, Leslie F.	Haverhill, Mass.
Hessell, Samuel Morris	Roxbury, Mass.
Hicks, Jasper, Jr.	Newport, R. I.
Higgins, Ernest R.	Milton, Mass.
Hill, Mrs. A. F.	
Hill, W. M.	Boston, Mass.
Hilton, Albert John	Waltham, Mass.
Hoag, Winfred L.	Medford, Mass.
Hobart, Levitt	Boston, Mass.
Hodgins, Alfred	
Hoffenberg, Mrs. Fannie B.	West Roxbury, Mass.
Hofstedt, Herbert F.	Boston, Mass.
Hogan, Frank L.	Somerville, Mass.
Hogan, Thomas F.	Boston, Mass.
Holland, George C.	Groveland, Mass.
Holland, Joseph	
Holland, Patrick	Roxbury, Mass.
Holmes, C. E.	Stoughton, Mass.
Holmes, Galen L.	Hyde Park, Mass.
Holmes, Harry G.	Lynn, Mass.
Holmes, Prescott	Winthrop, Mass.
Homsey, Nasser A.	Boston, Mass.
Hopkins, John L.	Brookline, Mass.
Horio, Louis L.	Boston, Mass.
Horne, Eric	E. Braintree, Mass.
Horton, William R.	Lynn, Mass.
Houghton, A. W.	Stoneham, Mass.
Hourula, Leeds	Quincy, Mass.
Howard, Carlos A.	Watertown, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Howe, Alvah M.	Greene, Maine
Howe, Edward J.	Boston, Mass.
Howland, Elmer L.	Dorchester, Mass.
Hume, John M.	Somerville, Mass.
Hunt, Richard E.	Roxbury, Mass.
Hurd, Beumont.	Lynn, Mass.
Hurley, Mrs. Agnes J.	Cambridge, Mass.
Hutchins, Mrs. Alice M.	Chelsea, Mass.
Hutchins, Mrs. Eva	Jamaica Plain, Mass.
Hutchinson, John C.	E. Braintree, Mass.
Hutchinson, William S.	E. Braintree, Mass.
Innis, Mark	Everett, Mass.
Jagrello, James P.	Dorchester, Mass.
Jaynes, Gilbert	Chelsea, Mass.
Jemmott, C. Granville	Roxbury, Mass.
Jenner, John S. F.	Dedham, Mass.
Jensen, Carl.	Boston, Mass.
Jensen, Oscar E. R.	Boston, Mass.
Johnson, Arthur W.	Burlington, Mass.
Johnson, Arthur	Jamaica Plain, Mass.
Johnson, Carl William	Mattapan, Mass.
Johnson, Charles H.	Boston, Mass.
Johnson, George	Watertown, Mass.
Johnson, James	Stoneham, Mass.
Jonah, William C.	Walpole, Mass.
Jones, Adrian H.	Middleboro, Mass.
Jones, Bradford	Brookline, Mass.
Jones, Walter F.	Belmont, Mass.
Joyce, Patrick	Roxbury, Mass.
Judge, Lester	Somerville, Mass.
Juneau, Reginald Brooks	Portsmouth, N. H.
Junta, Samuel L.	Everett, Mass.
Kahn, Samuel	Kendall Green, Mass.
Kaladzum, Macey	Roxbury, Mass.
Kamp, Paul	Jamaica Plain, Mass.
Kane, John F.	Windham, N. H.
Kaplan, Myer	Roxbury, Mass.
Katz, George	Boston, Mass.
Katz, Hyman	Chelsea, Mass.
Kay, Cecil Rhodes	Somerville, Mass.
Keefe, Augustine M.	Lawrence, Mass.
Keefe, Thomas	
Keegan, Miss Ellen S.	Cambridge, Mass.
Keegan, William E.	Jamaica Plain, Mass.
Keene, Thomas L.	Lubec, Maine
Kelley, Bernard J.	Charlestown, Mass.
Kelley, Edward O.	Boston, Mass.
Kelley, James Joseph	Brookline, Mass.
Kelley, John Francis	Cambridge, Mass.
Kelley, John J.	Roxbury, Mass.
Kelly, Hugh	Boston, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Kennedy, Charles A.	Somerville, Mass.
Kennedy, John	Boston, Mass.
Kenney, Bernard	Waltham, Mass.
Kenney, John J.	Revere, Mass.
Kenny, James	Brookline, Mass.
Killick, William	Revere, Mass.
Kinard, Albert	Cambridge, Mass.
Kingston, William D.	Boston, Mass.
Kiolinski, Steve	Boston, Mass.
Kirkland, Charles P.	Brockton, Mass.
Klamans, Hilmar	Chelsea, Mass.
Klein, Isaac	Roxbury, Mass.
Kligerman, Harry G.	Boston, Mass.
Klemons, Albert	Bristol, Conn.
Klemons, Joseph	Bristol, Conn.
Knipe, Warren M.	Boston, Mass.
Koelsch, Edgar F.	Jamaica Plain, Mass.
Kolgian, John	Boston, Mass.
Koster, Howard G.	Cambridge, Mass.
Krause, George Albert	Watertown, Mass.
Kushmerek, Walter	Chelsea, Mass.
Laidlow, Miss Olive	Natick, Mass.
Lambert, Miss Alice H.	South Boston, Mass.
Lambert, Emerson	Needham, Mass.
Lane, Miss F. M.	Boston, Mass.
Laplant, Thomas F.	Highgate, Vermont
LaRiveire, Eugene Francis	Malden, Mass.
Lassen, Walter A.	Cambridge, Mass.
Laurie, Garfield	Roxbury, Mass.
Lauziere, Maurice J.	Roxbury, Mass.
LaZar, George	Peabody, Mass.
Leahy, John T.	Fall River, Mass.
Leary, Dennis G.	East Boston, Mass.
Ledyard, James C.	Bath, Maine
Lehtonen, Frank H.	E. Braintree, Mass.
Lembree, Octave Joseph	Brookline, Mass.
Lenon, Patrick	Roslindale, Mass.
Leonard, Denis	South Boston, Mass.
Lepre, Dominic	Boston, Mass.
Leviston, William	Boston, Mass.
Lindsay, Kenneth G.	Newcastle, Maine
Linekin, Donald A.	Arlington, Mass.
Linton, Arthur Buxton	Woonsocket, R. I.
Little, Charles J.	Dorchester, Mass.
Little, Mrs. R. H.	Boston, Mass.
Littlefield, Hubert	Whitman, Mass.
Liverman, Henry	Boston, Mass.
Long, Alfred H.	Everett, Mass.
Lord, Charles Fred	Roxbury, Mass.
Lord, M. W.	
Lorentsson, Eric	Dorchester, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Loring, Norman R.....	Cambridge, Mass.
Loud, William B.....	Weymouth, Mass.
Lough, Dwight W.....	Boston, Mass.
Love, Stanley A.....	Waltham, Mass.
Love, Westley.....	Charlestown, Mass.
Lowrey, John.....	Waltham, Mass.
Lucet, John L.....	Boston, Mass.
Lucey, John Joseph.....	Roxbury, Mass.
Lumis Charles.....	South Boston, Mass.
Lund, Emily.....	West Roxbury, Mass.
Lunn, Mrs. Ida.....	Winthrop, Mass.
Lurie, Mrs. Ida.....	Dorchester, Mass.
Lussier, Leo E.....	Salem, Mass.
Lyons, Esmond C.....	Danvers, Mass.
Lyons, James J.....	Roxbury, Mass.
MacDonald, Albert J.....	Boston, Mass.
MacDonald, George.....	Boston, Mass.
MacDonald, Leland W.....	Somerville, Mass.
MacDonald, Mary B.....	Cambridge, Mass.
MacDonald, Michael.....	Cambridge, Mass.
MacKay, Ernest R.....	Lynn, Mass.
MacLaren, C. Oliver.....	Medford, Mass.
MacLean, Raymond L.....	Brighton, Mass.
MacLeod, Lawrence W.....	Atlantic, Mass.
MacLeod, Roderick D.....	Boston, Mass.
Macomber, Charles M.....	South Boston, Mass.
MacPherson, A. N.....	Boston, Mass.
MacQuarrie, M. C.....	Forest Hills, Mass.
MacRae, Philip J.....	Wellesley Hills, Mass.
MacWilliam, Alexander.....	Lincoln, Mass.
Maestri, Max.....	Boston, Mass.
Magoon, Walter W.....	Richford, Vermont
Maguire, James P.....	Jamaica Plain, Mass.
Maguire, John T.....	Charlestown, Mass.
Maher, Patrick.....	Medford, Mass.
Mahoney, James.....	Somerville, Mass.
Mahoney, John.....	Wakefield, Mass.
Mahoney, John J.....	Charlestown, Mass.
Mahoney, W. H.....	Boston, Mass.
Maistrellis, John W.....	Peabody, Mass.
Malgeri, John J.....	East Boston, Mass.
Maloney, Robert J.....	Brookline, Mass.
Malcomson, Alexander.....	Brookline, Mass.
Mancini, Enrico.....	Lynn, Mass.
Manning, Patrick R.....	Roxbury, Mass.
Manning, Peter.....	Boston, Mass.
Manoli, Charles.....	Boston, Mass.
Manson, Mrs. J. T.....	Boston, Mass.
Manter, Harold.....	Cambridge, Mass.
Manzo, Louis.....	East Boston, Mass.
Marashlian, John.....	Chelsea, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Margotion, Peter	Somerville, Mass.
Mark, John	Hyde Park, Mass.
Markert, Carl	Boston, Mass.
Marsh, Clyde O.	Boston, Mass.
Marshall, Louis F.	Everett, Mass.
Marsilli, William R.	Needham, Mass.
Martin, F. A.	Groton, Mass.
Martin, Hugh	Brockton, Mass.
Mason, Ansel R.	Portland, Maine
Masury, Mrs. Mena C.	Brookline, Mass.
Matarlazzo, Ralph	Charlestown, Mass.
Mathewson, Mrs. Lillian B.	Malden, Mass.
Maylor, Gilbert	Everett, Mass.
Maynard, Ernest E.	Middleboro, Mass.
Mayo, Jeremiah J.	Brighton, Mass.
Mays, Theodore	Boston, Mass.
Melanson, Arthur	Bryantville, Mass.
Melquist, Daniel	Pembroke, Mass.
Melvin, Roland W.	Rangeley, Maine
Menchin, Harry	Quincy, Mass.
Merlino, Anthony	Boston, Mass.
Merrill, Mrs. Minnie L.	Boston, Mass.
Messinger, Marshall E.	Melrose, Mass.
Metcalf, John Tracy	Winthrop, Mass.
Metzgar, Leroy L.	Lynn, Mass.
Milch, Edmund J.	Mattapan, Mass.
Miller, Miss Annie	Dorchester, Mass.
Miller, Arthur L.	Bath, Maine
Miller, Milton M.	Quincy, Mass.
Miller, Newton	Dorchester, Mass.
Mills, John K. S.	Boston, Mass.
Minton, Edwin F.	Dorchester, Mass.
Minton, James J.	South Boston, Mass.
Mirakian, Zarvin P.	Revere, Mass.
Mitchell, Paul Robert	Boston, Mass.
Mock, Ralph J.	Jamaica Plain, Mass.
Mofford, Reginald A.	Boston, Mass.
Monagan, Mrs. Sophia H.	Greenwood, Mass.
Monahan, John H.	Watertown, Mass.
Mooney, James Joseph	Waltham, Mass.
Mooney, Robert J.	Waltham, Mass.
Moore, Charles	Cambridge, Mass.
Moors, Mrs. Mary	Everett, Mass.
Moran, John	Brookline, Mass.
Moran, Walter X.	South Boston, Mass.
Moreau, Ralph T.	Somerville, Mass.
Morency, Arthur W.	Salem, Mass.
Morgan, Russell A.	Leominster, Mass.
Morin, Ely	Salem, Mass.
Morris, Martin J.	Dorchester, Mass.
Morse, Arthur H.	South Hanover, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Morse, Charles E.....	Malden, Mass.
Morse, Charles Raymond.....	Mansfield, Mass.
Morton, Edwin R.....	Roxbury, Mass.
Mosher, Harold.....	Waverley, Mass.
Mosher, John I.....	Boston, Mass.
Mossman, A. H.....	Brookline, Mass.
Mowry, Philip Edw.....	Marlboro, Mass.
Muir, Robert B.....	Roslindale, Mass.
Mulbey, Charles.....	Boston, Mass.
Mulhearn, Michael.....	Roxbury, Mass.
Mullany, Peter.....	Dorchester, Mass.
Mullally, Earle R.....	Boston, Mass.
Mullen, George B.....	Somerville, Mass.
Mullen, George H.....	Dorchester, Mass.
Mundy, Thomas J.....	Cambridge, Mass.
Munroe, John T.....	Boston, Mass.
Murch, Maurice A.....	No. Baldwin, Maine
Murdock, Mrs. A.....	
Sister Muriel, O.S.A.....	Boston, Mass.
Murphy, Charles.....	Boston, Mass.
Murphy, J. F.....	Dorchester, Mass.
Murphy, James D.....	Dorchester, Mass.
Murphy, Joseph A.....	P. E. Island, Canada
Murphy, Joseph F.....	Dorchester, Mass.
Murphy, Joseph Wm.....	South Boston, Mass.
Murray, John W.....	Boston, Mass.
Musculus, William A.....	Roslindale, Mass.
Myers, Miss Frances.....	Brookline, Mass.
Mystkowski, Kozimiere.....	Chelsea, Mass.
McCann, George W.....	Nashua, N. H.
McCarthy, Cornelius B.....	Cambridge, Mass.
McCarthy, David.....	Peabody, Mass.
McCarthy, Mrs. Etta R.....	Brookline, Mass.
McCarthy, John W.....	Mattapan, Mass.
McClurg, Stanley.....	Atlantic, Mass.
McCormack, Daniel F.....	Mattapan, Mass.
McDermott, Bernard.....	Wellesley Farms, Mass.
McDermott, James J.....	Charlestown, Mass.
McDevitt, John.....	Roxbury, Mass.
McDevitt, Neal.....	Roxbury, Mass.
McDonald, William.....	Boston, Mass.
McDuffie, William.....	Cambridge, Mass.
McEleney, Hugh.....	Charlestown, Mass.
McFarlane, Wilfred S.....	Roxbury, Mass.
McGahan, Mrs. P. Rena.....	Cambridge, Mass.
McGee, Alfred G.....	South Braintree, Mass.
McGinnis, Frank G.....	Boston, Mass.
McGowan, Harold.....	Dorchester, Mass.
McGowan, Richard J.....	Melrose, Mass.
McGrail, Michael.....	Harding, Mass.
McGrath, Edward F.....	Somerville, Mass.

NORTHEASTERN AUTOMOTIVE SCHOOL

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Name	Home Address
McGuigan, John A.	Boston, Mass.
McGuire, Herbert F.	Quincy, Mass.
McKnight, Andrew G.	Jamaica Plain, Mass.
McLaughlin, Philip H.	East Boston, Mass.
McLean, John	Hamilton, Mass.
McLeod, Roderick M.	South Lincoln, Mass.
McLeod, William J.	Boston, Mass.
McMahon, Elmer E.	Boston, Mass.
McMahon, Stephen J.	Cambridge, Mass.
McManus, Andrew F.	Taunton, Mass.
McManus, Fred H.	Somerville, Mass.
McManus, Oscar T.	Abington, Mass.
McMuller, Claude W.	Boston, Mass.
McNamara, James J.	Watertown, Mass.
McPhee, Otis Burton	North Cohasset, Mass.
McQuaid, Edward P.	Chelsea, Mass.
McTaggart, Horace L.	Chestnut Hill, Mass.
Nasson, Andrew V.	Boston, Mass.
Nazarian, Jack	Roxbury, Mass.
Neff, Paul S.	Boston, Mass.
Nelson, Everett	Dorchester, Mass.
Nelson, Richard	Somerville, Mass.
Nelson, Willis F.	Melrose, Mass.
Nevett, Horace Wm.	Allston, Mass.
Nichol, Arthur	Boston, Mass.
Nichols, Earle C.	Lynn, Mass.
Nickerson, Arthur J.	South Boston, Mass.
Nickerson, Theodore R.	South Orleans, Mass.
Nietzel, George W.	Hyde Park, Mass.
Nitkin, Miss Edna I.	Chelsea, Mass.
Nolen, Thomas F.	Cambridge, Mass.
Norcross, Stoessel R.	Island Pond, Vt.
Norton, Charles P.	Brookline, Mass.
O'Brian, Theodore R.	Waltham, Mass.
O'Brien, Harry Paul	Medford, Mass.
O'Brien, James A.	Boston, Mass.
O'Brien, John H.	South Boston, Mass.
O'Connell, Dennis	Boston, Mass.
O'Connell, John	Roslindale, Mass.
O'Connell, Thomas J.	Somerville, Mass.
O'Connor, John	Watertown, Mass.
O'Hare, Sydney T.	Brockton, Mass.
Okuro, Arnold R.	Billerica, Mass.
O'Leary, Thomas F.	Lynn, Mass.
Oliver, Victor P., Jr.	Gloucester, Mass.
Olsen, O. E.	Boston, Mass.
Olsen, Edwin J.	Boston, Mass.
O'Neil, Augustine J.	Boston, Mass.
O'Neil, Daniel G.	Boston, Mass.
O'Neil, John Vincent	Waltham, Mass.
Orcutt, Ralph S.	Boston, Mass.

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Name	Home Address
Orlandello, Guiseppe	Boston, Mass.
Outhuse, M. Howard	Littleton, Mass.
Oxford, Arthur	Everett, Mass.
Paine, Carroll G.	Sharon, Mass.
Palmer, Frank H.	Everett, Mass.
Panosian, Stephen S.	Boston, Mass.
Pape, Henry G.	Boston, Mass.
Parker, George M.	Somerville, Mass.
Parker, Miss K.	Cambridge, Mass.
Parker, Pearl C.	Paris, Maine
Parlin, Horace A.	Somerville, Mass.
Parrish, Malcolm F.	Tyngsboro, Mass.
Patrick, Miss Anna	Waltham, Mass.
Patriquin, Ainsley	Dorchester, Mass.
Patten, Frank H.	Boston, Mass.
Patterson, James F.	Dorchester, Mass.
Patterson, Mrs. Jane	Dorchester, Mass.
Pauley, Earl G.	Brockton, Mass.
Paulson, Paul M.	Boston, Mass.
Payette, Arthur F.	Somerville, Mass.
Payette, Frederick O.	Boston, Mass.
Pearce, Arthur R.	Concord Junction, Mass.
Peardon, Thomas	Everett, Mass.
Pearson, Francis O.	Winthrop, Mass.
Peirce, Mrs. Edward	Brookline, Mass.
Perkins, Donald E.	Penobscot, Maine
Perry, David C.	Swampscott, Mass.
Perry, Israel H.	Dorchester, Mass.
Petkus, Alfred G.	South Boston, Mass.
Petulis, Constantine	Lawrence, Mass.
Pevey, Mrs. Gilbert A.	Cambridge, Mass.
Philbrook, Guy W.	Lexington, Mass.
Philie, Wilfred L.	Watertown, Mass.
Pierce, Mrs. Philomena	Boston, Mass.
Pierce, Richard K.	Framingham, Mass.
Pierce, Russell F.	Framingham, Mass.
Pierpont, Miss Annie I.	Boston, Mass.
Pixley, Starr L.	Boston, Mass.
Poirier, Cornelius	Cambridge, Mass.
Poirier, Jean P. W.	Boston, Mass.
Poole, Mrs. C. H.	Waverley, Mass.
Potter, Alton A.	Boston, Mass.
Porter, Mrs. W. H.	Wakefield, Mass.
Post, Wilfred W.	Melrose Highlands, Mass.
Poulter, Herbert F.	Salem, Mass.
Pratt, Denis H.	Milford, Mass.
Pratt, Mrs. Wilma	Wollaston, Mass.
Pray, Charles S.	Somersworth, N. H.
Preston, Reuben	Brookline, Mass.
Price, Antony R.	Brighton, Mass.
Prosser, W. B.	Cambridge, Mass.

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Name	Home Address
Puddington, Earle E.....	North Cambridge, Mass.
Puta, Peter.....	South Boston, Mass.
Putnam, Louis C.....	Chelsea, Mass.
Putnam, Mrs. M.....	Waltham, Mass.
Quinlan, Maurice F.....	Dorchester, Mass.
Quinn, Frank L.....	Ware, Mass.
Raabe, Paul A.....	Fitchburg, Mass.
Rablin, Frank K.....	Dorchester, Mass.
Randall, L. F.....	Lawrence, Mass.
Rankin, F. S.....	Brookline, Mass.
Ransom, Benjamin F.....	Boston, Mass.
Rapp, Joseph.....	Waltham, Mass.
Rasmussen, John.....	Quincy, Mass.
Reading, Malcolm A.....	Chelsea, Mass.
Ready, Vincent C.....	Medford, Mass.
Redemann, Mrs.....	
Reid, Miss Alice W.....	Medford Hillside, Mass.
Reid, Henry J.....	East Lynn, Mass.
Reid, Wendell K.....	Danvers, Mass.
Reina, Alex.....	Roxbury, Mass.
Reivitis, George.....	Boston, Mass.
Reynolds, Mrs. Joseph A. Jr.....	Belmont, Mass.
Reynolds, Nelson H.....	Waterville, Maine
Rhoda, Edward M.....	Somerville, Mass.
Rhodes, Martin.....	Brookline, Mass.
Richards, Francis A.....	Leominster, Mass.
Richards, Franch P.....	Malden, Mass.
Richards, Walter D.....	Somerville, Mass.
Richardson, George P.....	Malden, Mass.
Rick, Miss Helena M.....	Brookline, Mass.
Rihan, Nessib S.....	Lawrence, Mass.
Rimkus, Anthony.....	South Boston, Mass.
Robblee, Valentine J.....	Somerville, Mass.
Roberts, Arthur.....	Dorchester, Mass.
Roberts, Ralph W.....	Roxbury, Mass.
Roberts, William F.....	Everett, Mass.
Robertson, Duncan M.....	Weymouth, Mass.
Robertson, Edgar H.....	Atlantic, Mass.
Robillard, Cleophee.....	Boston, Mass.
Robinson, Clarence S.....	Everett, Mass.
Rochefort, Henry C.....	Boston, Mass.
Rock, Arthur J.....	Salem, Mass.
Rodgers, William F.....	Boston, Mass.
Rodrigues, John D.....	Roxbury, Mass.
Roed, Evan.....	Cambridge, Mass.
Rollins, Bennie.....	Brockton, Mass.
Romanski, Earle.....	Boston, Mass.
Roper, Martin J.....	Cambridge, Mass.
Rosenfield, Mrs. Minnie.....	Newton, Mass.
Ross, Mrs. Gertrude.....	Dorchester, Mass.
Ross, Ragnar A.....	Norwood, Mass.

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Name	Home Address
Roulston, David C.	Mattapan, Mass.
Rowland, William F.	Boston, Mass.
Rozendo, Manuel A.	Boston, Mass.
Rudd, Mervyn A.	Amesbury, Mass.
Rudis, John	Lawrence, Mass.
Rumery, Frank M.	Beverly, Mass.
Runnalls, Richard H.	Boston, Mass.
Russo, Frederico	West Roxbury, Mass.
Ryan, C. Tracy	Allston, Mass.
Ryan, Joseph	Dorchester, Mass.
Ryder, John F.	Arlington, Mass.
Ryle, Leo B.	Charlestown, Mass.
Sabsay, Wiegard I.	Beachmont, Mass.
Safford, Raymond H.	Medford, Mass.
Sahlsten, A. Charles	Maynard, Mass.
St. Amand, Fred J.	Peabody, Mass.
Sand, Max L.	Boston, Mass.
Sandos, C. K.	Brookline, Mass.
Saunders, Warren F.	Winchester, Mass.
Saunders, William A.	Salem, Mass.
Sawyer, Albert K.	Winchester, Mass.
Scanlan, Miss Julia M.	Boston, Mass.
Schaller, Charles W.	Charlestown, Mass.
Scherer, Benedict L.	Belmont, Mass.
Schofield, Frank	Watertown, Mass.
Scott, J. Welwood	Somerville, Mass.
Seaman, T. Franklin	Boston, Mass.
Sears, Nathan F.	Wellesley
Seavey, Leonard R.	Rye Center, N. H.
Sepi, Anthony	Revere, Mass.
Settle, Miss J. B.	Dorchester, Mass.
Sharpe, Frederick	Boston, Mass.
Shaw, Richard C.	Brockton, Mass.
Sheehan, John P.	Charlestown, Mass.
Sheerin, John J.	Somerville, Mass.
Sherman, Mrs. A. J.	Cambridge, Mass.
Shorey, Arthur B.	Melrose, Mass.
Shorey, S. Roland	Dorchester, Mass.
Shriber, Joseph	Roxbury, Mass.
Shrum, Ralph	Revere, Mass.
Shuman, Gertrude	Dorchester, Mass.
Sibley, Walter D.	Boston, Mass.
Sikorsky, Lucy Nina	Boston, Mass.
Silva, Ralph O.	Somerville, Mass.
Silva, Raymond M.	Somerville, Mass.
Simon, Carin E.	Boston, Mass.
Simonds, Lincoln P.	Medford, Mass.
Siselsky, Morris	Boston, Mass.
Siu, Poy N.	Boston, Mass.
Skinner, Arthur E.	Boston, Mass.
Slade, John Albert	Belmont, Mass.

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Name	Home Address
Slocum, Lorne Roy.....	Boston, Mass.
Small, Edwin F.....	Bath, Maine
Small, Harry H.....	Boston, Mass.
Small, Sumner L.....	Sagamore, Mass.
Small, William N.....	Stoneham, Mass.
Smith, Albert J.....	Roxbury, Mass.
Smith, Miss E. M.....	Boston, Mass.
Smith, Miss Florence W.....	Cambridge, Mass.
Smith, George A.....	Boston, Mass.
Smith, Irving.....	Winthrop, Mass.
Smith, Lawrence C.....	Methuen, Mass.
Smith, Lester.....	Revere, Mass.
Smith, Thomas.....	Winchester, Mass.
Smith, Thomas D.....	North Truro, Mass.
Somerville, Murray.....	Dorchester, Mass.
Spanolis, Mick.....	Boston, Mass.
Spargo, Miss Nellie.....	Quincy, Mass.
Spicer, Hugh C.....	South Boston, Mass.
Spriano, Albert.....	Roslindale, Mass.
Spring, Edward.....	Boston, Mass.
Spitz, Mrs. Martha D.....	Brookline, Mass.
Stafford, Robert J.....	South Boston, Mass.
Steir, Frederick.....	Jamaica Plain, Mass.
Stern, Nat.....	Boston, Mass.
Stewart, Alexander.....	Cambridge, Mass.
Stewart, C. D.....	Boston, Mass.
Stewart, Kenneth M.....	Boston, Mass.
Stillings, Charles.....	Boston, Mass.
Stimpson, Miss Blanche L.....	Medford, Mass.
Stoler, Israel.....	Dorchester, Mass.
Stromsoe, Albert F.....	Cambridge, Mass.
Stone, Stanley K.....	Arlington, Mass.
Stone, Thomas G.....	Boston, Mass.
Stone, Thomas J.....	Boston, Mass.
Strickland, William A.....	Medford, Mass.
Strong, Harry H.....	Dorchester, Mass.
Stroucer, Walter W.....	Boston, Mass.
Studley, John Francis.....	Greenwood, Mass.
Sullivan, Frank.....	No. Abington, Mass.
Sullivan, Henry.....	Lynn, Mass.
Sullivan, Joseph.....	Boston, Mass.
Sully, Edward.....	Malden, Mass.
Surpluss, William H.....	Roslindale, Mass.
Swan, Thomas.....	Boston, Mass.
Swan, Walter Z.....	Portland, Maine
Sweetland, N. S.....	
Swett, John Henry.....	Hathorne, Mass.
Swim, Benjamin L.....	Medford, Mass.
Swinerton, Wm. Henry.....	Boston, Mass.
Tabbutt, George E.....	Newton, Mass.
Tagen, John J.....	Dorchester, Mass.

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Name	Home Address
Tappa, Mrs. E. B.	Cambridge, Mass.
Tarr, James G.	Gloucester, Mass.
Tate, Lamson F.	Salem, Mass.
Taylor, Dexter	Arlington, Mass.
Taylor, Cecil	Somerville, Mass.
Taylor, Herbert E.	Boston, Mass.
Taylor, Joseph E.	Boston, Mass.
Tench, William	Boston, Mass.
Thackaberry, George	Boston, Mass.
Thiesfeldt, Fred	Somerville, Mass.
Thistle, Norman A.	Jamaica Plain, Mass.
Thomas, Miss A. F.	Allston, Mass.
Thomas, Clinton F.	Lynn, Mass.
Thompson, Miss Augusta	West Roxbury, Mass.
Thompson, Augustine	Dorchester, Mass.
Tomei, Eugene	Boston, Mass.
Toole, Cameron S.	Boston, Mass.
Toshack, William	Chestnut Hill, Mass.
Towns, E. A.	Jamaica Plain, Mass.
Tracey, Edward J.	Waltham, Mass.
Tracy, Raymond J.	Island Pond, Vermont
Trainor, Miss Nellie C.	Boston, Mass.
Trask, Frank A.	Dorchester, Mass.
Trautman, Alexander	Newtonville, Mass.
Travers, Robert H.	Salem, Mass.
Trefethen, Albert L.	Waltham, Mass.
Trodden, John	Cambridge, Mass.
Tsui, Hsueh Yu	Cambridge, Mass.
Tucci, Mrs. Virginia	Cambridge, Mass.
Tucker, C. W.	Boston, Mass.
Tucker, Peter	Cambridge, Mass.
Tullock, James, Jr.	Marblehead, Mass.
Turner, John Henry	Boston, Mass.
Underhill, Albert	Somerville, Mass.
Urbanowski, Frank	
Urlwin, James E.	Somerville, Mass.
Urpshaytis, Joseph G.	South Boston, Mass.
Urvant, Isador	Dorchester, Mass.
Usseglio, Edward	East Boston, Mass.
Usher, Merton	Waltham, Mass.
Vail, Mrs. Corey M.	Cambridge, Mass.
Vail, Percy Jackson	Boston, Mass.
Van, Zau-liang	Boston, Mass.
Vancore, Harry Wayne	Framingham Center, Mass.
VanDyke, Miss Alice W.	Watertown, Mass.
VanNorden, Asa A.	East Boston, Mass.
Veilleux, Joseph A.	Waterville, Maine
Verrill, Stanley L.	Boston, Mass.
Vibert, Douglas	Somerville, Mass.
Vickerson, Edmund	No. Cambridge, Mass.
Vinal, John L.	Hull, Mass.

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Name	Home Address
Vinal, Mrs. S. W.	Boston, Mass.
Vyse, Charles H.	South Boston, Mass.
Waclawik, John A.	Taunton, Mass.
Wakeling, George H.	Brockton, Mass.
Waldie, John M.	Beverly, Mass.
Waldstein, George	Cambridge, Mass.
Walker, Archibald T.	Waltham, Mass.
Walker, John	Waltham, Mass.
Warner, Mrs. R. S.	Boston, Mass.
Waters, John W.	Cambridge, Mass.
Watson, Charles B.	Boston, Mass.
Watters, Alfred A.	Quincy, Mass.
Weisman, Samuel	Cambridge, Mass.
Welsford, George	Wollaston, Mass.
Welsh, Maurice J.	Brookline, Mass.
Westcott, George H.	Fall River, Mass.
Weston, James J.	Salem, Mass.
Wheeler, Holman L.	West Newton, Mass.
Wheeler, Richard H.	Newton, Mass.
Whipple, Albert E.	Boston, Mass.
White, Milford	Boston, Mass.
White, Ronald R.	Cambridge, Mass.
Whitehouse, Miss Gladys	Belmont, Mass.
Whitford, Henry W.	Medford, Mass.
Whitney, Charles R.	Westboro, Mass.
Whitney, Frank O.	Boston, Mass.
Wiggin, Miss Mildred	Arlington, Mass.
Wiles, Herman C.	Everett, Mass.
Wiley, Elmer L.	Peabody, Mass.
Williams, Mrs. C. A.	
Williams, Miss Eleanor	Dedham, Mass.
Williams, Frederick G.	Concord, Mass.
Williams, Mrs. Gertrude V.	Jamaica Plain, Mass.
Williams, Joseph	Roxbury, Mass.
Williams, Wesson B.	East Braintree, Mass.
Wilson, William	Quincy, Mass.
Wilson, Mrs. W. M.	Quincy, Mass.
Winer, Arthur A.	Roxbury, Mass.
Winn, Mrs. J.	Woburn, Mass.
Winslow, Gilbert	Mansfield, Mass.
Winston, Miss Marie T.	East Boston, Mass.
Wisse, Miss	Boston, Mass.
Witberg, Miss Aagot	Boston, Mass.
Wodeinuk, Eylam	Boston, Mass.
Wong, Lerry C.	Boston, Mass.
Wood, Henry B.	Wollaston, Mass.
Wood, James E.	Marblehead, Mass.
Woodberry, John Edward	Beverly, Mass.
Woodworth, Miss Emma	Boston, Mass.
Wright, Arthur	
Wuest, Jacob W. S.	Boston, Mass.

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REGISTER OF STUDENTS, 1923-1924

Name	Home Address
Wyatt, Sarah Ella	Watertown, Mass.
Yanofsky, Samuel.	Saugus, Mass.
Youvanian, John	Dorchester, Mass.
Young, Ford E.	Dorchester, Mass.
Young, Vernon L.	Boston, Mass.
Zakikian, John	Lynn, Mass.
Zeppernick, Miss Ethel I.	East Boston, Mass.
Ziegler, Mrs. Sadie H.	Boston, Mass.
Zimmermann, C. R.	Everett, Mass.
Zoland, Jerome	South Boston, Mass.
Zwicker, Herbert M.	Beverly, Mass.
Zwinglor, Alphonse	South Boston, Mass.
Zwininsky, Matty J.	South Boston, Mass.

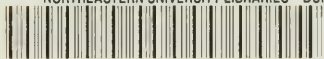


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